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FLUID CONTROL SYSTEMS

SOLENOID VALVES

PROCESS ACTUATION

PROCESS VALVES

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**Bürkert Fluid Control Systems**

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# Bürkert Select

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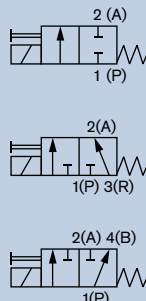


## 2/2 or 3/2-way Solenoid Valve for aggressive medium

0121

### G 3/8"

- Pivoted armature valve with manual override
- Direct-acting with separating diaphragm
- Different circuit functions
- Suitable for aggressive medium
- Body material plastic
- Threaded connection

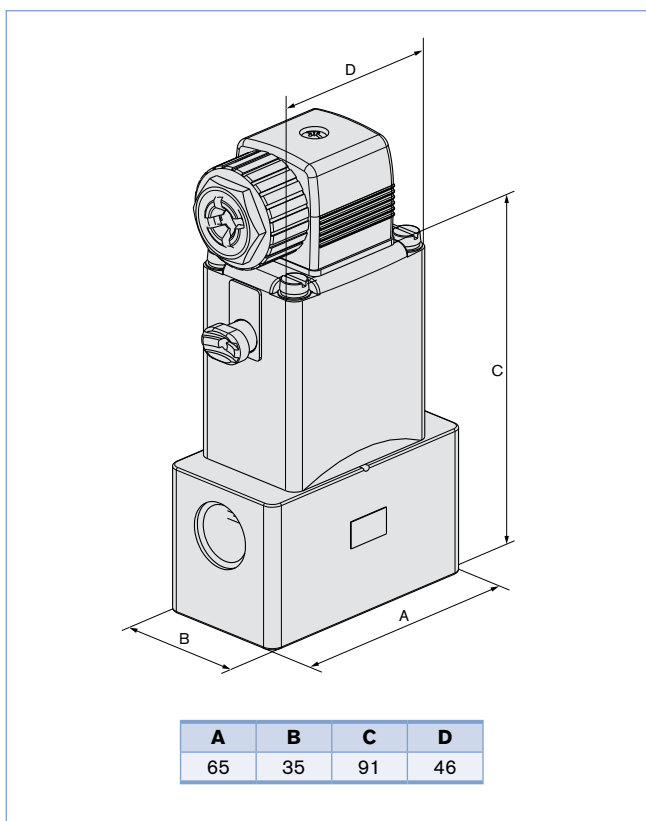


Type 0121 is a high quality, direct-acting 2/2 or 3/2 pivoted armature solenoid valve that can be used in a wide range of applications for opening, closing, dosing, mixing and distribution. The separation between the magnetic system and the medium chamber consists of an intermediate separating diaphragm system.

### Technical Data

<b>Orifice</b>	DN4.0-8.0 mm
<b>Body material</b>	PTFE, (PP, PVDF, Stainless steel 1.4401 on request) PVC (resistant acc. DIN 8062, 8061)
<b>Coil material</b>	Epoxy
<b>Coil insulation class</b>	H
<b>Seal material, medium</b>	FKM, FFKM, (EPDM on request)
FKM	Oxidizing acids and substances, oils, salt solutions, exhaust gas, vacuum
FFKM	Resistant to neutral and aggressive liquids and gases, see Bürkert chemical resistance chart
<b>Medium temperature</b>	
Body + seal (Material combination)	
PVC + FKM	-10 °C to +50 °C
PTFE+ FKM	-10 °C to +90 °C
PTFE + FFKM	-10 °C to +90 °C
<b>Ambient temperature</b>	Max. +50 °C
<b>Viscosity</b>	Max. 37 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	
Continuous operation	100% stainless steel body and for universal current (UC)
Intermittent operation	with PVC body 10% (10 min) with PP-, PTFE- and PVDF body 40% (10 min)
<b>Electrical connection</b>	Cable plug (included) Tag connector acc. to DIN EN 175301-803 Form A Exceptions see Index under Ordering chart
<b>Protection class</b>	IP 65 with cable or cable plug
<b>Installation</b>	as required, preferably with actuator upright

### Envelope Dimensions [mm] (see datasheet for details)



### Options

- ATEX version
- Optical or electrical position feedback

Inrush		Power consumption				Response times	
AC [VA]	UC [W]	AC [VA/W]	UC [W]	Hold	DC [W]	Opening [ms]	Closing [ms]
30	40	15/8	3	DC cold [W]	8	15-20	15-20
				11-12			

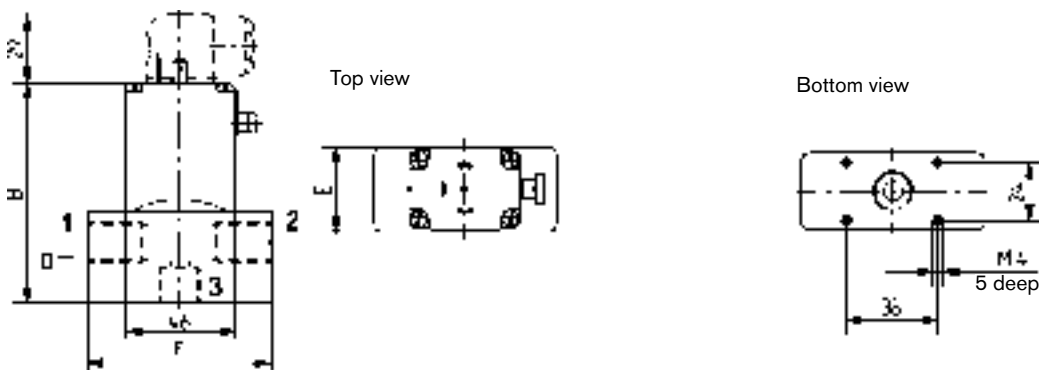
**Response times [ms]:** Measured at valve outlet at 6 bar and +20 °C  
*Opening:* Pressure build-up 0 to 90%, *Closing:* pressure relief 100 to 10%

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Body material	Seal material	Voltage/frequency [V/Hz]	Item no.
<b>Valve with plastic body, manual override and cable plug (UC with silicon cable, please see footnote)</b>								
A 2/2-way valve normally closed	G 3/8	4	0.3	0 - 2	PVC	FKM	024/DC	049 654
				0 - 4	PVC	FKM	024/50	048 940
							230/50	047 859
				0 - 2	PTFE	FFKM	024/DC	151 733
							0 - 4	024/UC
				G 3/8	6	0.6	0 - 1	PVC
	0 - 2	PVC	FKM				024/50	049 348
							230/50	047 810
	G 3/8	8	1	0 - 1	PVC	FKM	024/UC	048 697
							024/50	052 800
							230/50	052 302
	E 3/2-way mixer valve	G 3/8	4	0.3	0 - 2	PTFE	FFKM	024/UC
230/50								130 934
F 3/2-way distributor valve	G 3/8	6	0.6	0 - 1	PVC	FKM	024/DC	049 533
				0 - 2	PVC	FKM	024/50	052 181
							230/50	047 916

\* With 1 m silicone cable

## Envelope Dimensions [mm] (see datasheet for details)



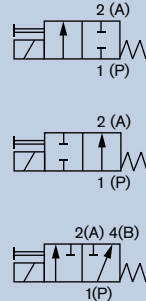
Body material	D	B	E	F
PTFE and PVC	G 3/8"	91	35	65
Possible port configurations				
Circuit function	1	2	3	
A	P	-	A	
E	P1	P2	A	
F	A	B	P	

# 2/2- or 3/2-way PVC Solenoid Valve for aggressive Mediums

0131

## True union or G 3/8" - G 1/2"

- With hermetic isolation of fluid
- Insensitive to aggressive fluids
- Universal functions
- Lockable manual override as standard
- Simple installation and removal



Type 0131 is a direct-acting 2/2- or 3/2-way solenoid valve with different circuit functions. The actuator is isolated from the fluid by a double seal made of PTFE. No fluid contact with metallic components.

### Technical Data

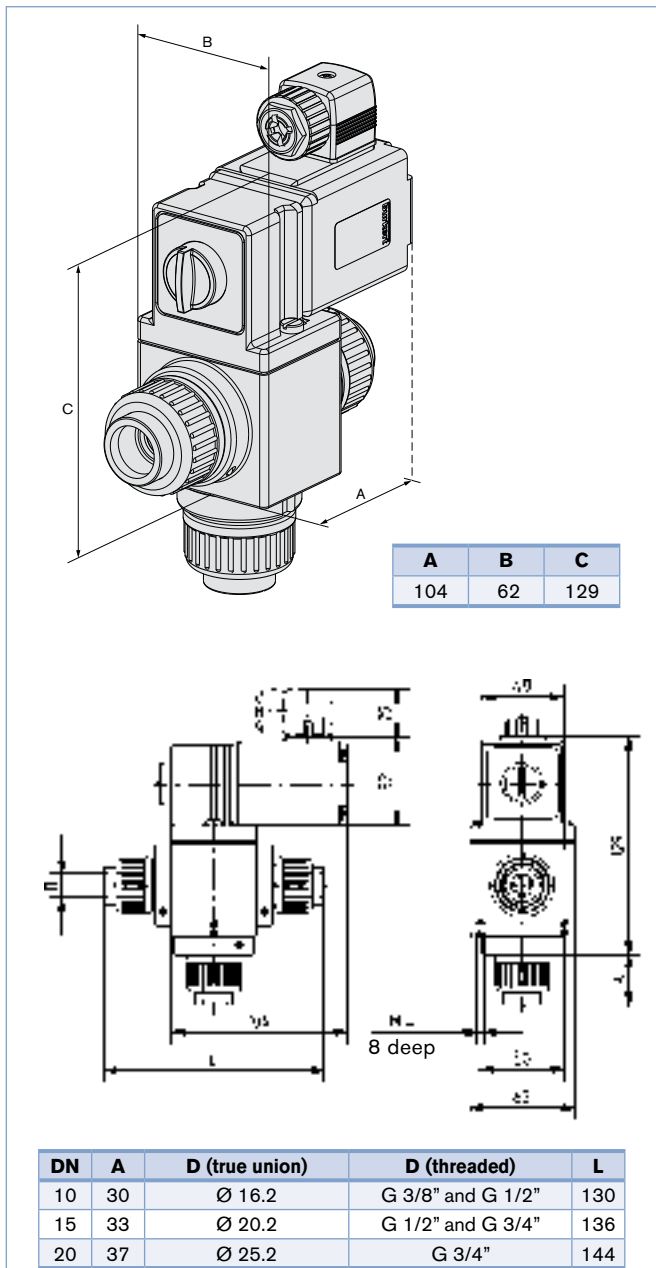
<b>Orifice</b>	DN10-20 mm
<b>Body material</b>	PVC PVDF on request
<b>Coil material</b>	Epoxy
<b>Coil isolation class</b>	H
<b>Seal material</b>	EPDM, FKM
<b>Medium</b>	
EPDM	Alkalis, alkaline washing and bleaching lyes
FKM	Oxydizing acids and substances, salt solutions
<b>Medium temperature</b>	
Body + Seal (material combination)	
PVC/EPDM	-30 °C to +50 °C
PVC/FKM	-10 °C to +50 °C
<b>Ambient temperature</b>	Max. +50 °C
<b>Viscosity</b>	Max. 37 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Cycling rate</b>	ca. 100-150/min for AC Max. 6/min for UC
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Cable plug for Ø 7 mm cable, acc. to DIN EN 175301-803 Form A (supplied as standard)
<b>Protection class</b>	IP 65 with cable or cable plug
<b>Installation</b>	as required, preferably with actuator upright

Power consumption			
Inrush		Hold (hot coil)	
AC [VA]	UC [W]	AC [VA/W]	UC [W]
100-120	100	32/16	9

### Options

- UR/CSA approvals

### Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

Circuit function	Port connection	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Item no. per voltage/frequency [V/Hz]			
					230/UC	230/50	024/50	024/UC
<b>Seal material EPDM</b>								
A 2/2-way valve normally closed	G 1/2"	10	2	0 - 3	–	056 795	–	023 759
	True union Ø 16 mm			0 - 3	–	050 549	–	046 949
	True union Ø 20 mm			0 - 3	–	056 791	–	–
	G 1/2"	15	4.5	0 - 1	–	054 831	–	067 832
	True union Ø 20 mm			0 - 1	168 193	055 423	051 028	050 809
	True union Ø 25 mm			0 - 0.5	–	051 257	053 992	045 225
B 2/2-way valve normally open	True union Ø 16 mm	10	2	0 - 2	–	017 113	–	–
	True union Ø 25 mm	20	6	0 - 0.5	051 748	–	–	–
F 3/2-way distributor valve	True union Ø 16 mm	10	2	0 - 1	–	052 546	064 266	055 770
	True union Ø 20 mm	15	4	0 - 0.5	–	052 071	058 279	049 883
	True union Ø 25 mm	20	5	0 - 0.25	–	054 564	040 921	067 076
<b>Seal material FKM</b>								
A 2/2-way valve normally closed	True union Ø 16 mm	10	2	0 - 3	–	050 443	052 953	047 915
	True union Ø 20 mm			0 - 3	–	056 789	055 817	056 060
	G 1/2"	15	4.5	0 - 1	–	056 663	–	047 398
	True union Ø 20 mm			0 - 1	–	050 787	051 641	053 882
	True union Ø 25 mm			0 - 0.5	–	051 351	050 551	056 495
B 2/2-way valve normally open	True union Ø 16 mm	10	2	0 - 2	–	053 221	–	058 361
F 3/2-way distributor valve	G 3/8"	10	2	0 - 1	–	–	–	065 194
	True union Ø 16 mm			0 - 1	–	052 619	–	058 362
	True union Ø 20 mm	15	4	0 - 0.5	–	050 904	–	–
	True union Ø 25 mm			0 - 0.5	020 687	–	–	–
	True union Ø 25 mm			0 - 0.25	–	066 280	–	058 363



## 2/2-way Solenoid Valve for neutral media

0131

### G 3/8"–G 3/4"

- Direct acting
- With hermetic isolation of fluid
- Lockable manual override as standard
- NC and NO circuit function
- Optional with electrical position feedback



The direct-acting valve, Type 0131, is delivered with circuit function, normally closed or normally open. The solenoid actuator is separated from the medium by a double PTFE seal with a small ventilated space. The valve is used for shut-off, dosing, filling and ventilating medium where low pressures are applicable; also suitable for use in technical vacuum.

### Technical Data

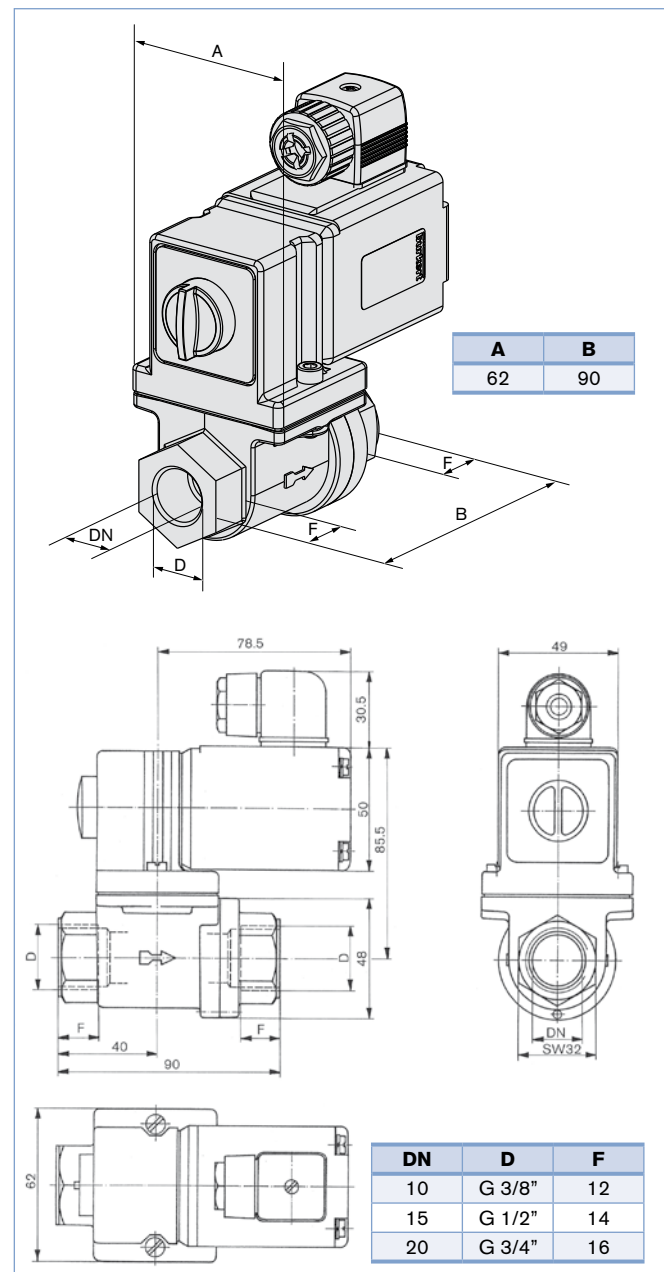
<b>Body material</b>	Brass
<b>Seal materials</b>	NBR, FKM
<b>Medium</b>	
with NBR	Neutral liquids e.g. compressed air, water, hydraulic oil, oils and fats without additives, technical vacuum
with FKM	Hot air, per-solution, hot oil, oils with additives, technical Vacuum
<b>Medium temperature</b>	
with NBR	-10 up to +90 °C
with FKM	-10 up to +130 °C
<b>Ambient temperature</b>	Max. +50 °C
<b>Viscosity</b>	100 to 21 mm <sup>2</sup> /s
<b>Operating voltages</b>	24 V/UC 230 V/50 Hz Other Voltages on request
<b>Voltage tolerance</b>	±10%
<b>Cycling rate</b>	Max. 6/min with UC
<b>Duty cycle</b>	ED 100%
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)
<b>Protection class</b>	IP65 with cable plug
<b>Coil insulation class</b>	H
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times [ms]:</b>	Measured at valve outlet at 6 bar and +20 °C.
Opening	Pressure relief 0 90%
Closing	Pressure relief 100 to 10%

Electrical power consumption		
	Inrush	Hold
AC	100 VA	48 VA (16 W)
UC	100 W	9 W

### Options

- Electrical position feedback

### Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

Circuit function	Orifice [mm]	Port connection [inch]	Kv Value water [m³/h]	Pressure range [bar]	Seal material	Voltage/Frequency [V/Hz]	Item no.
A Normally closed	10	G 3/8	2	0 - 3	NBR	24/UC	057 475
						230/50	053 059
					FKM	24/UC	054 053
						230/50	044 502
	15	G 1/2	4.5	0 - 1	NBR	24/UC	054 102
						230/50	052 221
					FKM	24/UC	025 537
						230/50	040 549
	20 *	G 3/4	6	0 - 0.5	NBR	24/UC	049 751
						230/50	048 490
					FKM	24/UC	069 752
						230/50	048 622
B Normally open	10	G 3/8	2	0 - 2	NBR	24/UC	059 208
						230/50	051 685
	15	G 1/2	4.5	0 - 1	NBR	24/UC	058 371
						230/50	046 466
	FKM	230/50	046 643				
		20 *	G 3/4	6	0 - 0.5	NBR	24/UC
	230/50						053 807

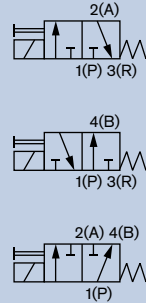
\* Versions with 20 mm nominal diameter are not suitable for vacuum

# 3/2-way Solenoid Valve for neutral medium

0131

## G 3/8" - G 1/2"

- Direct acting
- With hermetic isolation of fluid
- With lockable manual override
- Universal functions
- Electrical feedback optional



The direct acting 3/2-way valve, Type 0131, is available in different circuit functions.

The solenoid actuator is separated by a double seal of PTFE with a ventilated clearance from Medium.

The valve is used for shut-off, dosing, filling, ventilating and distributing Medium with low pressures; also with technical Vacuum for DN10 mm.

### Technical Data

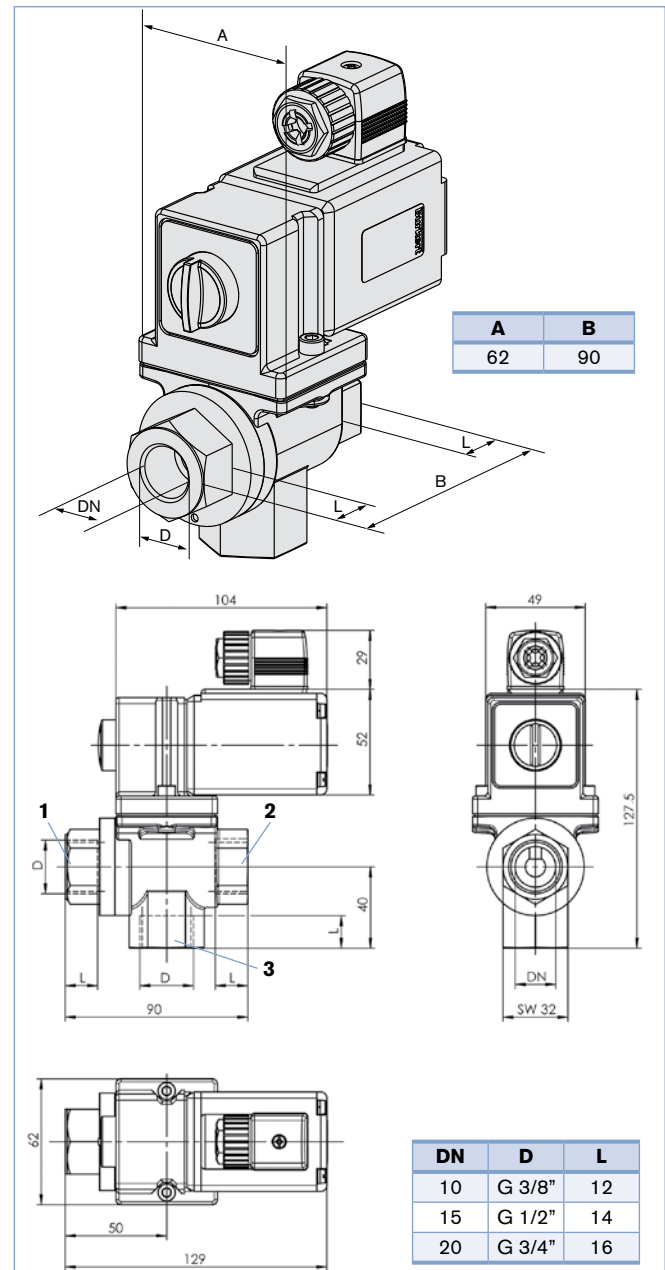
<b>Body material</b>	Brass
<b>Seal material</b>	NBR (EPDM or FKM on request)
<b>Medium</b>	Neutral fluids such as e.g. compressed air, water, hydraulic oil, oils and fats without additives, technical vacuum
<b>Medium temperature</b>	-10 °C to +80 °C
<b>Ambient temperature</b>	Max +50 °C
<b>Viscosity</b>	100 to 15 mm <sup>2</sup> /s
<b>Operating voltage</b>	24/230 V UC other voltages on request
<b>Voltage tolerance</b>	± 10 %
<b>Cycling rate</b>	Max. 6/min with UC
<b>Duty cycle</b>	100%
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)
<b>Protection class</b>	IP65 with Cable Plug
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times [ms]</b>	Measured at valve outlet with air at 6 bar and +20 °C
Opening	Pressure build-up 0 to 90%,
Closing	Pressure relief 100 to 10%

	Electr. power consumption		Response times	
	Inrush	Hold	Opening	Closed
AC	100 VA	48 VA (16 W)	10 to 20	40 to 60
UC	100 W	9 W		

### Options

- Circuit function E on request
- Electrical position feedback

### Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

Circuit function	Orifice [mm]	Port connection [inch]	Kv Value water [m³/h]	Pressure range [bar]	Voltage/frequency [V/Hz]	Item no.
<b>All valves with manual override, brass body, NBR seal and cable plug</b>						
C Normally closed 3 way configuration	10	G 3/8	2	0 - 1	24/UC	048 997
					230/UC	059 302
	15	G 1/2	4	0 - 0.5	24/UC	062 737
					230/UC	062 481
D Normally open 3 way configuration	15	G 1/2	4	0 - 0.5	24/UC	021 964
F Distribution valve	10	G 3/8	2	0 - 1	24/UC	064 025
					230/UC	062 960
	15	G 1/2	4	0 - 0.5	24/UC	058 843
					230/UC	062 124

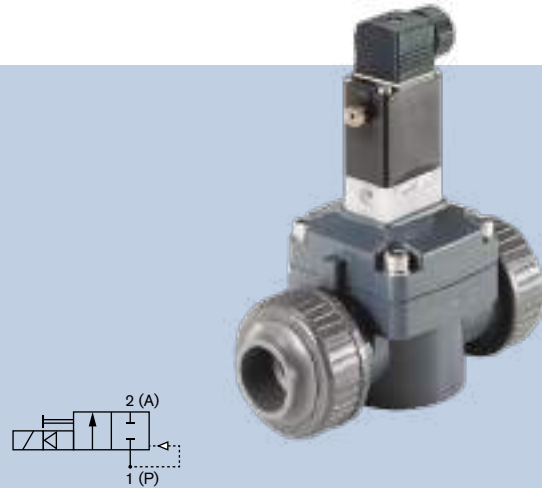
Note: Versions with orifice 15 mm are not suitable for vacuum

## 2/2-way Solenoid Valve for aggressive media

0142

### Ø 20 - Ø 63 mm, true union

- Unique isolated technology for slightly contaminated fluids
- Rugged moulded diaphragm
- No metallic internal parts
- Pilot control with pivoted armature and lockable manual override



This valve is specifically designed for aggressive fluids where a chemically compatible solution is required. The pilot operated solenoid valve needs to open and close a minimum differential pressure of 0.5 bar.

### Technical Data

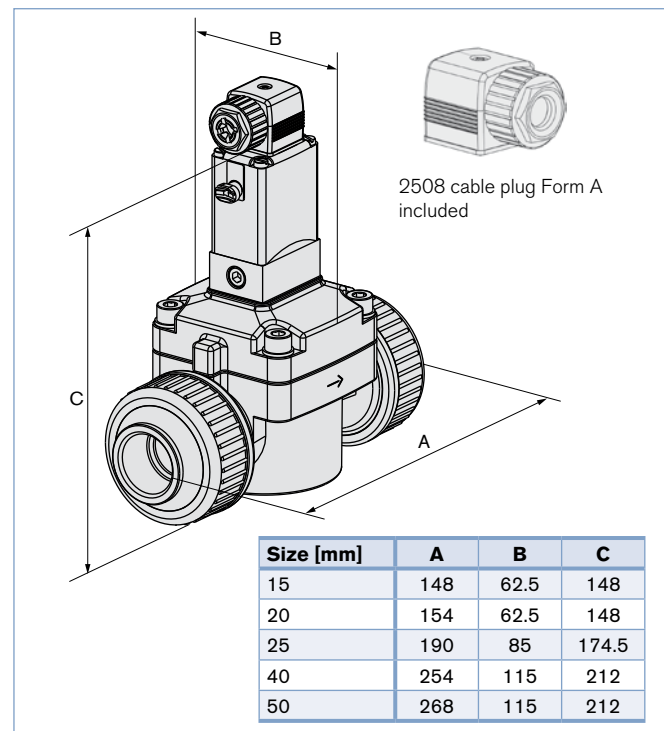
<b>Pressure range</b>	0.5-6 bar
<b>Temperature media</b>	0 °C to +50 °C
<b>Max. Ambient temperature</b>	0 °C to +40 °C (PVC), (0 °C to +55 °C, PVDF on request)
<b>Valve internal parts</b>	PVDF
<b>Body material</b>	PVC (PVDF on request)
<b>Seal material</b>	EPDM or FKM
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	DC: 5 W, AC: 20 VA (inrush), 11 VA (hold)
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)
<b>Response times <sup>1)</sup></b>	
Opening [ms]	100 - 800
Closing [ms]	1000 - 4000

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C acc. to ISO 12238.  
Opening: Pressure rise 0 to 90%, Closing: Pressure drop 100 to 10%

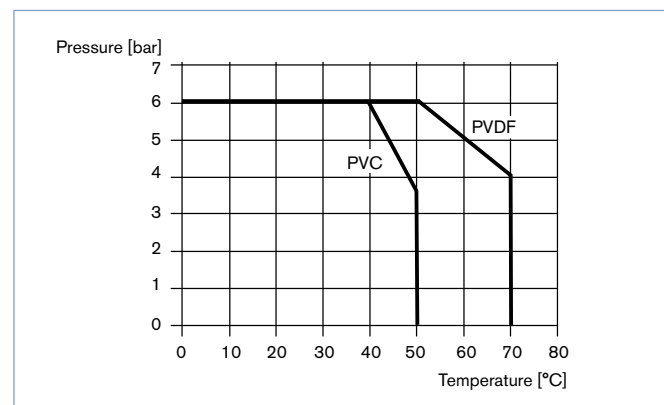
### Options

- Normally open
- Electrical position feedback
- Impulse coil
- Threaded port connection
- Range of diaphragm seals to suit aggressive media
- Cable plug with LED and varistor
- CSA certification

### Envelope Dimensions [mm] (see datasheet for details)



### Pressure Temperature chart for PVC and PVDF



## Ordering Chart

Port connection Ø [mm]	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Seal material	Item no. voltage/frequency [V/Hz]		
					024V DC	024V AC	230V AC
<b>normally closed (other versions on request)</b>							
<b>PVC Body, true union</b>							
20	15	5	0.5 - 6	EPDM	041 980	050 898	041 911
20	15	5	0.5 - 6	FKM	041 938	050 953	041 934
25	20	6	0.5 - 6	EPDM	042 045	050 908	041 986
25	20	6	0.5 - 6	FKM	042 008	050 954	042 005
32	25	14	0.5 - 6	EPDM	042 047	050 916	042 126
32	25	14	0.5 - 6	FKM	042 079	050 974	042 113
50	40	30	0.5 - 6	EPDM	042 195	067 693	042 247
50	40	30	0.5 - 6	FKM	042 198	067 699	042 245
63	50	36	0.5 - 6	EPDM	042 266	067 705	042 261
63	50	36	0.5 - 6	FKM	042 264	054 887	042 262

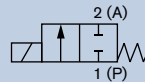
0142

# Plunger Operated 2/2-way Solenoid Valve for neutral media and high temperatures

0255

## G 1/4" - G 1/2"

- Fluid temperature to 180 °C
- Integrated metallic body seal
- Wear resistant stainless steel seat



High performance plunger operated, direct-acting solenoid valve with integrated metallic body seal and wear resistant stainless steel seat. Three way (Type 0355), high pressure (100 bar), and high temperature (250 °C) versions are also available.

### Technical Data

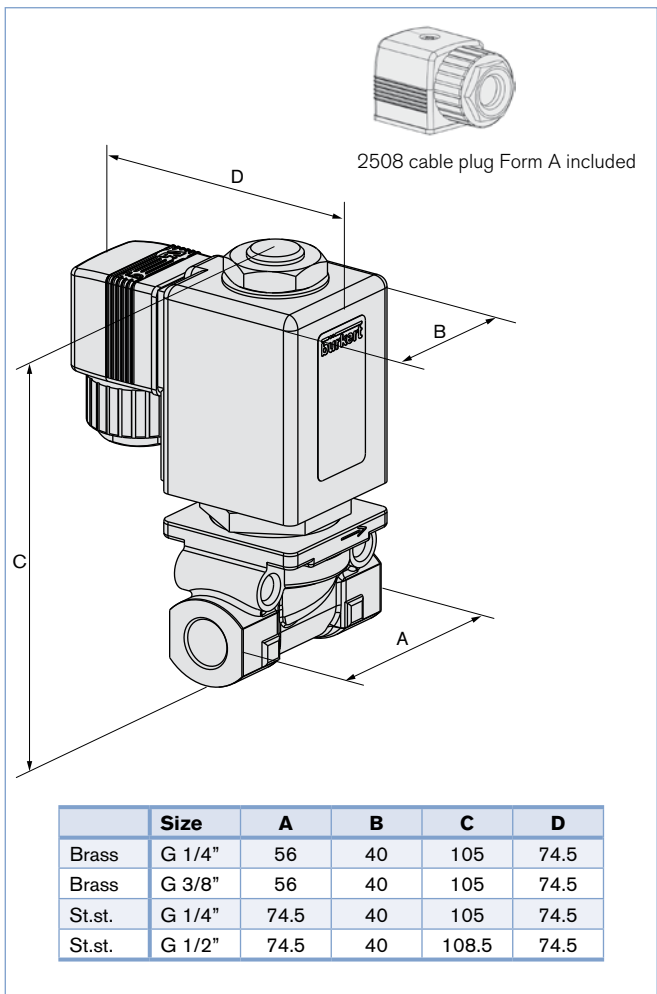
<b>Temperature media</b>	-40 °C to +180 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	Brass with moulded stainless steel seat 1.4305 or stainless steel 1.4581
<b>Seal material</b>	PTFE
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	DC: 16 W, AC: 35-40 VA (inrush), 16/10 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)
<b>Response times <sup>1)</sup></b>	
Opening [ms]	AC 10-20, DC 20-80
Closing [ms]	AC 20-30, DC 20-30

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C acc. to ISO 12238.  
Opening: Pressure rise 0 to 90%, Closing: Pressure drop 100 to 10%

### Options

- CSA/UR approval
- Cable plug with LED and/or varistor
- FM Class 1 Div 2 approval
- UL listed version
- ATEX approval
- Other sealing materials on request
- Silicone, oil and grease-free for oxygen

### Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			DC	AC	024V DC	024V AC	230V AC
<b>Brass body</b>							
G 1/4	3	0.25	0 - 10	0 - 16	052 872	058 421	046 865
G 3/8	4	0.5	0 - 4	0 - 10	065 438	059 100	051 143
G 3/8	6	0.8	0 - 1	0 - 4	053 764	050 389	051 324
<b>Stainless steel body</b>							
G 1/4	3	0.25	0 - 10	0 - 16	021 554	018 593	061 010
G 1/4	4	0.5	0 - 4	0 - 10	021 251	020 468	023 279
G 1/2	6	0.8	0 - 1	0 - 4	022 504	052 859	054 811

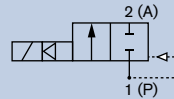


# 2/2-way hard-coupled Solenoid Valve

0290

## G 1/2" - G 2"

- Switches without differential pressure
- Operates on vacuum
- Process proven rugged and reliable design



One of the ever reliable workhorses of the Bürkert solenoid range this hard-coupled solenoid valve with plunger piloted rugged diaphragm seal is perfect for vacuum, neutral gases and liquids. The high-performance design is available in brass and stainless steel with a range of diaphragm and seal materials.

### Technical Data

<b>Medium temperature</b> <sup>1)</sup>	NBR	-10 °C to +80 °C
	FKM	0 °C to +120 °C
	EPDM	-30 °C to +120 °C
<b>Ambient temperature</b>	+55 °C, max.	
<b>Voltage tolerance</b>	±10%	
<b>Duty cycle</b>	100% continuous rating	
<b>Body material</b>	Brass, stainless steel 1.4581	
<b>Seal material</b>	NBR, EPDM or FKM	
<b>Coil material</b>	Epoxy (Class H)	
<b>Protection class</b>	IP65 (with cable plug)	
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)	

<sup>1)</sup> Max. medium temperature for versions with high power electronics (with coding... /UC) withstands 90 °C

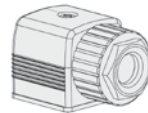
Orifice [mm]	Power consumption				Response times <sup>2)</sup>	
	Inrush AC [VA]	UC [W]	Hold AC [VA/W]	UC [W]	Opening [ms]	Closing [ms]
12	100	80	25/10	6	100	700
20	120	100	32/16	9	to	to
25	120	100	32/16	9	250	2000
32	120	100	32/16	9	300	700
40	120	100	32/16	9	to	to
50	-	30	-	30	1000	4000

<sup>2)</sup> Measured at valve outlet at 6 bar and +20 °C, pressure rise 0 to 90%, pressure drop 100 to 10%

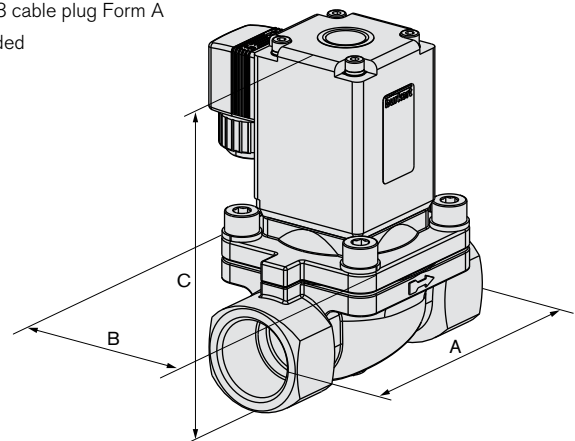
### Options

- EPDM seals
- Cable plug with LED and varistor
- Oxygen version
- UR/CSA approval
- KTW approval
- Flange connection acc. to DIN 2501 (DN25-50 mm)

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A included



Size	A	B	C
G 1/2"	74.5	70	95.5
G 3/4"	100	70	122
G 1"	115	70	131
G 1 1/4"	126	70	145
G 1 1/2"	126	70	154
G 2"	164	70	211

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Pressure range [bar]	Seal material	Item no. voltage/frequency [V/Hz]		
					024/50	024/UC/DC <sup>1)</sup>	230/50
<b>A 2/2-way valve normally closed</b>							
<b>Brass body</b>							
G 1/2	12	1.8	0 - 16	EPDM	045 931	049 050	044 816
G 3/4	20	5			065 033	058 427	045 290
G 1	25	10			054 245	057 155	045 291
G 1 1/4	32	16	0 - 12		-	-	085 259
G 1 1/2	40	16			-	-	087 732
G 2	50	38			-	-	077 494 <sup>2)</sup>
G 1/2	12	1.8	0 - 16	NBR	043 816	050 294	044 373
G 3/4	20	5			058 766	049 518	045 292
G 1	25	10			048 171	053 675	045 293
G 1 1/4	32	16	0 - 12		085 290	085 291	052 513
G 1 1/2	40	16			085 294	085 295	085 297
G 2	50	38			-	-	085 301
<b>Stainless steel body</b>							
G 1/2	12	1.8	0 - 16	EPDM	045 765	048 606	043 553
G 3/4	20	5			066 460	059 910	065 025
G 1	25	10			-	018 348	059 901
G 1/2	12	1.8	0 - 16	FKM	048 708	049 987	042 888
G 3/4	20	5			065 362	066 381	064 701
G 1	25	10			018 121	065 542	066 125

<sup>1)</sup> The coil for UC power supply is provided with an integrated high power electronic. Please check sufficient power supply

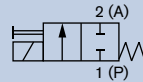
<sup>2)</sup> The valve is provided with a cable plug with integrated rectifier

# Pivot Operated 2/2-way Solenoid Valve in plastic

0330

## G 1/4"

- With separating diaphragm
- For aggressive media
- Also available for mounting on manifolds (Type 0331)
- Standard with lockable manual override

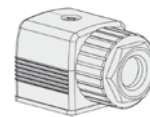


Direct-acting solenoid valve employing Bürkert's unique pivoted armature. A hermetic isolation is guaranteed against aggressive substances by the flexible diaphragm. Shown is the threaded version in precision moulded engineered polymer. The valve is also available in manifold mount as the Type 0331.

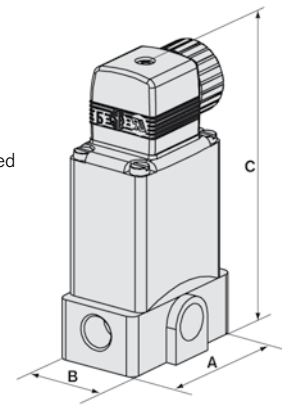
### Technical Data

<b>Temperature media</b>	-30 °C to +80 °C (EPDM) 0 °C to +80 °C (FKM)
<b>Ambient temperature</b>	+55 °C, max.
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	
Intermittent operation	40% ED (30 min) with 8 W version
Continuous operation	100% ED with 5 W version (on request)
<b>Body material</b>	PP or PVDF
<b>Seal material</b>	FKM or EPDM NBR and FFKM on request
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	DC: 8 W, AC: 30 VA (inrush), 15 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A included



Size	A	B	C
G 1/4"	56	36	104

Orifice [mm]	Response times			
	AC		DC	
	Opening [ms]	Closing [ms]	Opening [ms]	Closing [ms]
2-4	8-15	8-15	10-20	10-20

**Response times [ms]:** Measured at valve outlet at 6 bar and +20 °C  
*Opening:* pressure build-up 0 to 90%, *closing:* pressure drop 100 to 10%

### Options

- 2/2-way normally open, 3/2-way version
- Electrical position feedback
- Impulse coil
- Flange version
- Vacuum version
- CSA, ATEX and UR accreditation
- Alternative cable plug
- 5 W coil

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m3/h]	Pressure range [bar]		Seal material	Item No. voltage/frequency [V/Hz]		
			DC	AC		024V DC	024V AC	230V AC
<b>Normally closed (other versions on request)</b>								
Polypropylene G 1/4	3	0.25	0 - 8	0 - 10	EPDM	067 214	022 105	062 398
					FKM	018 410	088 496	045 653
	4	0.3	0 - 4	0 - 5	EPDM	021 660	067 731	063 118
					FKM	062 695	043 005	063 116
	5	0.4	0 - 3	0 - 4.5	EPDM	061 321	054 261	049 969
					FKM	062 624	067 007	022 619
PVDF G 1/4	3	0.25	0 - 8	0 - 10	EPDM	019 224	122 385	086 873
					FKM	018 188	020 286	069 006
	4	0.3	0 - 4	0 - 5	EPDM	057 573	–	125 507
					FKM	023 472	069 079	087 837
	5	0.4	0 - 3	0 - 4.5	EPDM	120 184	059 802	130 117
					FKM	064 512	–	063 786

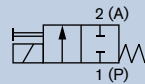
0330

# Pivot Operated 2/2-way Solenoid Valve in brass or stainless steel

0330

## G 1/4"

- Isolating separating diaphragm design
- Handles slightly contaminated fluids with ease
- With lockable manual override
- Long life even when running dry



Direct-acting solenoid valve employing Bürkert's unique pivoted armature. A hermetic isolation is guaranteed by this ground-breaking design. Shown is the threaded version. The valve is also available in manifold mount as the Type 0331.

### Technical Data

<b>Temperature media</b>	0 °C to +90 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Viscosity</b>	Max. 37 mm <sup>2</sup> /s
<b>Body material</b>	Brass or Stainless steel 1.4401
<b>Seal material</b>	FKM (FFKM, NBR and EPDM on request)
<b>Coil material</b>	Epoxy (Class H)
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	Continuous operation 100% ED
<b>Power consumption</b>	DC: 8 W, AC: 30 VA (inrush), 15 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)

Orifice [mm]	Response times			
	AC		DC	
	Opening [mm]	Closing [ms]	Opening [ms]	Closing [ms]
2-4	8-15	8-15	10-20	10-20

#### Response times [ms]:

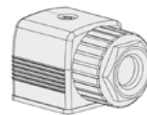
Measured at valve outlet at 6 bar and +20 °C

Opening: pressure build-up 0 to 90%, Closing: pressure relief 100 to 10%

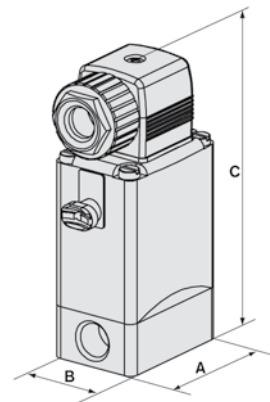
### Options

- Three way versions
- Electrical position feedback
- Impulse coil
- Vacuum version
- Additional seal materials
- Cable plug
- CSA Class 1 Div 2
- FM Class 1 Div 1
- UL Listed version
- ATEX, Type 0780
- 2-way, normally open
- Analysis version
- Version with higher purity and tightness (analysis version)

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A included



Size	A	B	C
G 1/4"	46	34	100

## Ordering Chart

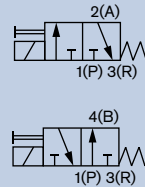
Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]		Pressure range [bar] DC and 50 Hz	Item no. voltage/frequency [V/Hz]		
		DC	50 Hz		24/DC	24/50 Hz	230/50Hz
<b>Normally closed 2 way configuration</b>							
<b>Brass valve body</b>							
G 1/4	3	0.14	0.18	0 - 10	020 293	022 883	124 909
	4	0.17	0.23	0 - 5	024 019	025 246	124 912
<b>Stainless steel valve body</b>							
G 1/4	3	0.14	0.18	0 - 10	020 292	023 984	024 563
	4	0.17	0.23	0 - 5	018 276	018 857	020 873

# Pivot Operated 3/2-way Solenoid Valve in brass or stainless steel

0330

## G 1/4"

- Isolating separating diaphragm design
- Long service life
- Handles slightly contaminated fluids with ease
- Manual override as standard

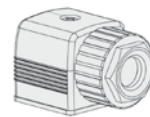


Direct-acting 3/2-way normally closed and normally open solenoid valves with pivoted armature and isolating diaphragm. This flexible valve series includes many options, various body materials, diaphragm and sealing materials and a range of electrical connections to suit many applications.

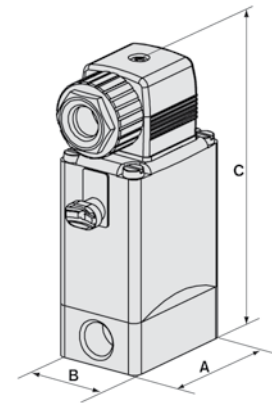
### Technical Data

<b>Temperature media</b>	0 °C to +80 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Viscosity</b>	Max. 37 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	Brass (stainless steel on request)
<b>Seal material</b>	NBR (FFKM, KM and EPDM on request)
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	DC: 8 W, AC: 30 VA (inrush), 15 VA (hold)
<b>Protection class</b>	IP65, NEMA 4 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug  
Form A included



Size	A	B	C
G 1/4"	46	34	100

Orifice [mm]	Response times			
	AC		DC	
	Opening [ms]	Closing [ms]	Opening [ms]	Closing [ms]
2-4	8-15	8-15	10-20	10-20

**Response times [ms]:** Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure relief 0 to 90%, closing: pressure relief 100 to 10%

### Options

- Electrical position feedback
- Impulse coil
- Vacuum version
- Cable plug with LED and varistor
- Flange version Type 0331 with manifold mounting
- ATEX approval
- Version with higher purity and tightness (analysis model)

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]		Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
		DC	50 Hz		24/DC	24/50 Hz	230/50Hz
<b>Normally closed 3 way configuration</b>							
<b>Brass valve body</b>							
G 1/4	2	0.08	0.11	0 - 16	041 103	042 129	041 105
	3	0.14	0.18	0 - 10	041 107	041 108	041 116
<b>Normally open 3 way configuration</b>							
<b>Brass valve body</b>							
G 1/4	2	0.08	0.11	0 - 16	056 984	041 858	041 137
	3	0.14	0.18	0 - 10	041 139	041 141	041 147

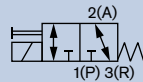


# Pivot Operated 3/2-way Universal Solenoid Valve in brass or stainless steel

0330

## G 1/4", 0-12 bar max.

- Universal flow function
- Isolating separating diaphragm design
- Handles slightly contaminated fluids with ease
- Manual override as standard
- Long lifetime

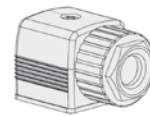


Direct-acting 3/2-way universal function (E) solenoid valves with pivoted armature and isolating diaphragm. This flexible valve series includes many options, various body materials, diaphragm and sealing materials and a range of electrical connections to suit many applications.

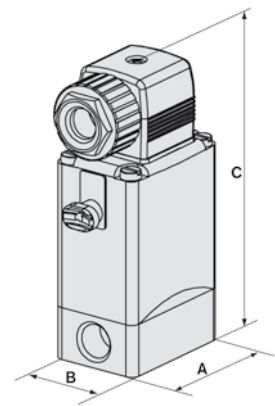
### Technical Data

Temperature media	0 °C to +90 °C
Ambient temperature	+55 °C, max.
Viscosity	Max. 37 mm <sup>2</sup> /s
Voltage tolerance	±10%
Duty cycle	100% continuous rating
Body material	Brass or Stainless steel 1.4401
Seal material	FKM (FFKM, NBR and EPDM on request)
Coil material	Epoxy (Class H)
Power consumption	DC: 8 W, AC: 30 VA (inrush), 15 VA (hold)
Protection class	IP65, NEMA 4 (with cable plug)
Electrical connection	Cable plug acc. to DIN EN 175301-803, Form A (included)

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A included



Size	A	B	C
G 1/4"	46	34	100

Orifice [mm]	Response times			
	AC		DC	
	Opening [ms]	Closing [ms]	Opening [ms]	Closing [ms]
2-4	8-15	8-15	10-20	10-20

**Response times [ms]:** Measured at valve outlet at 6 bar and +20 °C  
*Opening:* pressure relief 0 to 90%, *closing:* pressure relief 100 to 10%

### Options

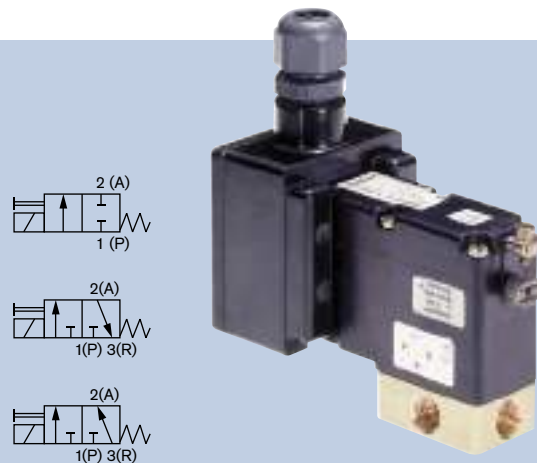
- Electrical position feedback
- Impulse coil
- Range of diaphragm seals to suit aggressive media
- Vacuum ring version
- Cable plug with LED and varistor
- Class 1, Div 2 FM & CSA
- Flange version Type 0331 with manifold mounting
- ATEX approval
- Version with higher purity and tightness (analysis model)

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]		Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
		DC	50 Hz		24/DC	24/50 Hz	230/50Hz
<b>Universal version 3 way configuration</b>							
<b>Brass valve body</b>							
G 1/4	2	0.08	0.11	0 - 12	124 922	138 316	124 925
	3	0.14	0.18	0 - 8	124 927	124 928	124 930
<b>Stainless steel body</b>							
G 1/4	2	0.08	0.11	0 - 12	124 932	124 933	124 935
	3	0.14	0.18	0 - 8	124 937	124 938	124 940

## 2/2 or 3/2-way Pivoted Armature Solenoid Valve with Ex approval

- Direct-acting with isolating diaphragm
- With lockable manual override
- For liquid, gaseous and aggressive media
- For slightly contaminated fluids
- Long service life, even in non-lube conditions



Type 0330 Ex is a direct-acting 2/2 or 3/2-way pivoted armature solenoid valve with Ex approval and high service life, even when run dry. It is suitable for neutral, abrasive and lightly contaminating media, with a stainless steel body for aggressive media.

### Technical Data

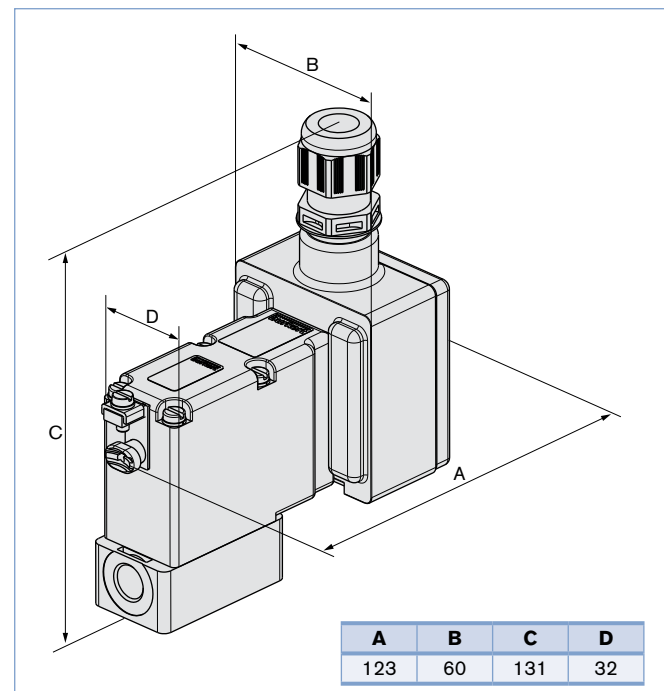
<b>Orifice</b>	DN3.0 mm
<b>Body and seat materials</b>	Brass and stainless steel 1.4401
<b>Seal materials</b>	NBR, FKM
<b>Media</b>	
with NBR	Neutral media such as compressed air, water, oil
with FKM	hot air, oxygen, hot oils, per-solutions
<b>Media temperature</b>	
with NBR	0 °C to +80 °C
with FKM	0 °C to +90 °C
<b>Ambient temperature</b>	Max. +55 °C
<b>Viscosity</b>	Max. 37 mm <sup>2</sup> /s
<b>Operating voltage</b>	24/230 V UC
<b>Voltage tolerance</b>	±10%
<b>Cycle rate 1</b>	Max. 20/min
at medium temp. and at ambient temp.	to +70 °C to +40 °C
<b>Cycle rate 2</b>	Max. 5/min
at medium temp. and at ambient temp.	to +90 °C to +40 °C
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Terminal box without safety fuse moulded-in cable, 3 m HO5RN-F3G, 3 x 0.75 mm <sup>2</sup> on request
<b>Fuse</b>	Semi-delay fuse (corresponding to nominal current)
<b>Power consumption</b>	UC: 40 VA (inrush), 3 W (hold)
<b>Protection class</b>	IP65
<b>Type of protection</b>	II 2 D Ex tD A21 IP65 T135 °C resp. 100 °C II 2 G Ex d e IIC T4 resp. T5
<b>Installation</b>	As reqd., preferably with actuator in upright position

Response times <sup>1)</sup>	
Opening [ms]	Closing [ms]
30	40

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C

Opening: pressure relief 0 to 90%, closing: pressure relief 100 to 10%

### Envelope Dimensions [mm] (see datasheet for details)



### Other circuit functions

The valves are fitted with different springs. When used in other circuit functions, the permissible operating pressure changes according to the following table.

Circuit function	Max. operating pressure [bar] when using the valve in a new circuit function					
	Orifice 3					
WW	A	B	C	D	E	F
C	10	1	10	1	1	10
E	6	6	6	6	6	6
F	6	1	6	1	1	10

### Options

- Seal material EPDM and FFKM
- Other circuit functions

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv-value water [m <sup>3</sup> /h]	Pressure range [bar]	Seal material	Body material <sup>1)</sup>	Electrical connection <sup>2)</sup>	Item no. per Voltage/Frequency [V/Hz]	
								024/UC	230/UC
<b>All valves with manual override, protection type Ex ed II C T5</b>									
A 2/2-way, normally closed (NC)	G 1/4	3	0.23	0 - 10	NBR	Brass	Terminal box	137 077	137 079
						Stainless steel	Terminal box	137 081	137 083
C 3/2-way, normally closed (NC)	G 1/4	3	0.23	0 - 10	NBR	Brass	Terminal box	124 619	125 567
						Stainless steel	Terminal box	135 080	137 075
E 3/2-way mixer	G 1/4	3	0.23	0 - 6	FKM	Stainless steel	Terminal box	137 085	135 624

<sup>1)</sup> For circuit functions A and B, valve bodies with straight flow

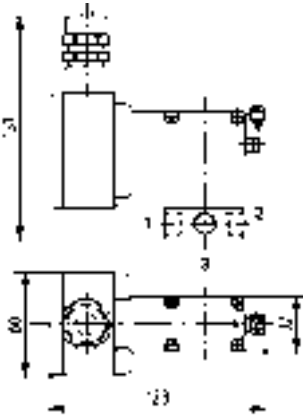
<sup>2)</sup> Terminal box = with Terminal box without safety fuse

Moulded-in cable with cable fitting and strain relief (HO5RN-F3G, 3 x 0.75 mm<sup>2</sup>, 3 m long) on request

## Accessories

Voltage [V]	Max. current [A]	Item no.
<b>Fuse Type 1058</b>		
24	2	153 740
230	0.315	153 733

## Envelope Dimensions [mm] (see datasheet for details)



**Version with terminal box**

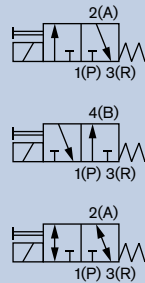
Possible connections			
Circuit function	1	2	3
A	P	A	-
C	P	A	R
E	P1	A	P2

# 3/2-way Solenoid Valve, Flange

0331

## DN2 and 3 mm

- 3-way valve with pivoted armature
- For liquid and gaseous medium
- Direct-acting and media separated
- Standard with lockable manual override



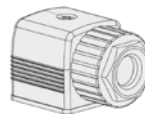
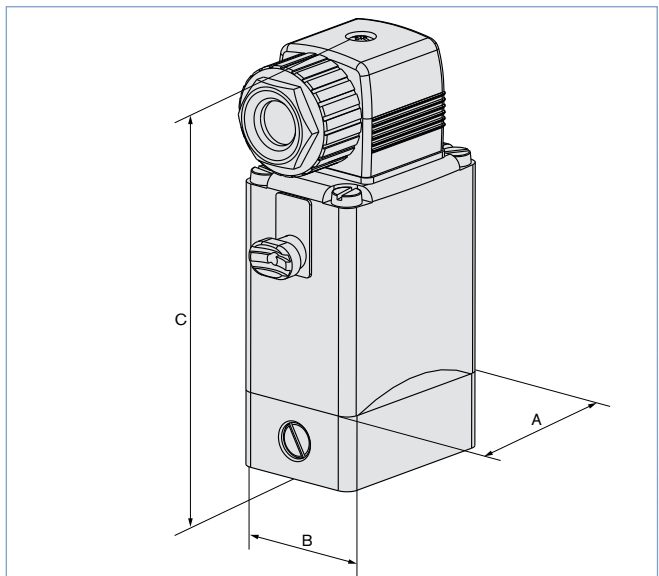
Type 0331 is a direct-acting 3/2-way pivoted armature solenoid valve for flange mounting. The magnetic system and the media chamber are separated from one another by a separating diaphragm system. The valve is fast-acting and has a long service life, even in non-lube conditions.

### Technical data

<b>Medium temperature</b>	
NBR	0 °C to 80 °C
FKM	0 °C to 90 °C
EPDM (on request)	-30 °C to 90 °C
<b>Ambient temperature</b>	
	Max. 55 °C
<b>Viscosity</b>	
	Max. 37 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	
	±10%
<b>Duty cycle</b>	
	Continuous operation 100% ED
<b>Manifold mounting</b>	
	use reduced ED or 5 W coil
<b>Body and seat materials</b>	
	Brass (stainless steel 1.4401 on request)
<b>Seal material</b>	
	NBR, FKM (EPDM on request)
<b>Coil material</b>	
	Epoxy (class H)
<b>Power consumption</b>	
	AC: 30 VA, DC: 8 W (inrush)
	AC: 15/8 VA/W, DC: 8 W (hold)
<b>Protection class</b>	
	IP 65 (with Cable Plug)
<b>Electrical connection</b>	
	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (included)
<b>Response times</b>	
AC Opening/Closing [ms]	8-15
AC Opening/Closing [ms]	10-20

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
*Opening:* Pressure build-up 0 to 90%,  
*Closing:* Pressure drop 100 to 10%

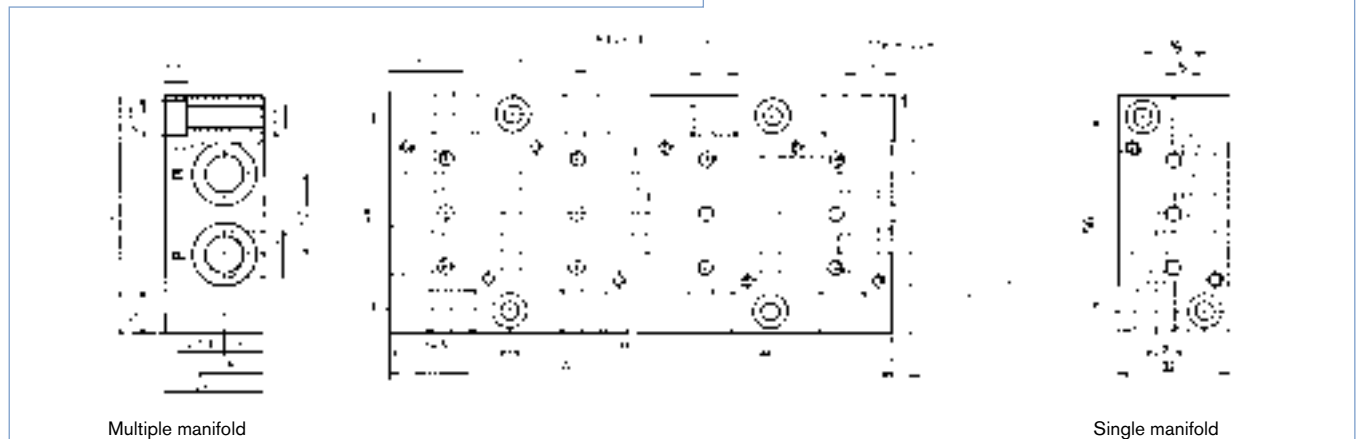
Dimensions [mm] (see datasheet for further Details)



2508 Cable Plug  
Form A included

Size	A	B	C
G 1/4"	46	34	100

### Manifolds



Multiple manifold

Single manifold

## Ordering Chart

Port connection	Orifice [mm]	Kv value [m <sup>3</sup> /h] <sup>1)</sup>	Pressure range [bar] <sup>1)</sup>	Item No. voltage/frequency [V/Hz]		
				024/DC	024/50	230/50
<b>3/2-way valve, seal material NBR, port P normally closed</b>						
Flange	2	0.10	0 - 16	041 183	041 184	041 188
	3	0.15	0 - 10	041 195	041 198	041 209
<b>3/2-way valve, seal material NBR, port P normally open</b>						
Flange	2	0.10	0 - 16	041 234	041 235	041 242
	3	0.15	0 - 10	041 247	041 248	041 254
<b>3/2--way valve, seal material FKM, any flow direction</b>						
Flange	2	0.10	0 - 16	124 953	124 954	124 956
	3	0.15	0 - 10	124 958	124 959	124 961

<sup>1)</sup> For DC versions the nominal diameter is reduced to 0.5 mm.

<sup>2)</sup> Please be aware that the above valves cannot be used for vacuum.

The valves are manufactured with different springs. The valves can be applied also in other circuit functions with respect to different pressure rates.

0331

<b>Flange valve manifolds made of anodised aluminium</b>	
Manifold	Item No.
1 valve	005 043
2 valves	005 045
3 valves	005 366
4 valves	005 294
5 valves	005 295
6 valves	005 296
7 valves	005 403
8 valves	006 074

## Accessories

Manifold	Item no.
Covering plate for unused valve positions	005 625

## Options

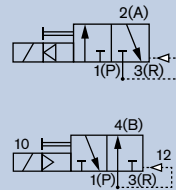
- Approvals UL, UR, GL, CGA / AGA
- UL Hazardous Locations
- Vacuum version
- Electrical feedback positioner
- Version without manual override

# 3/2-way Solenoid Valve with pivoted armature pilot drive

0340

## G 1/4" - G 1 1/2"

- Servo-Piston for large flow rates
- Pivoted armature isolated pilot
- Manual override as standard
- Fast ventilation function



Servo-assisted 3/2-way normally closed and normally open solenoid valve with a pivoted armature and isolating diaphragm. This series encompasses a range of diaphragms, sealing materials and electrical connections. Perfect for pneumatic actuation of very large process valves. For the complete opening and closing a differential pressure of 0.5 bar is required.

### Technical Data

<b>Temperature media</b>	0 °C to +90 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	Brass
<b>Seal material</b>	NBR
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	DC: 8 W, AC: 30 VA (inrush), 15 VA (hold)
<b>Protection class</b>	IP65, NEMA 4 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)
<b>Response times [ms]</b>	Measured at valve outlet at 6 bar and +20 °C
Opening	Pressure build-up 0 to 90%
Closing	Pressure decay 100 to 10%
	(see Ordering Chart)

Orifice [mm]	Response times <sup>1)</sup>	
	Opening [ms]	Closing [ms]
8	25	25
12	30	30
20	40	40
25	70	70
40	120	120

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
 Opening: Pressure rise 0 to 90%  
 Closing: Pressure drop 100 to 10%

### Options

- Electrical position feedback
- Impulse coil
- Range of diaphragm seals to suit difficult media
- Cable plug with LED and varistor

### Envelope Dimensions [mm] (see datasheet for details)

Size	A	B	C
G 1/4"	65	33	154.5
G 1/2"	76	33	179.5
G 3/4"	90	52	215.5
G 1"	110	60	237.5
G 1 1/2"	153	88	274

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
				024/DC	024/AC	230/AC
<b>Normally closed</b>						
G 1/4	8	0.95	0.5 - 16	041 317	041 318	041 329
G 1/2	12	2.6	0.5 - 16	041 333	041 334	041 346
G 3/4	20	6.6	0.5 - 16	041 354	041 665	041 361
G 1	25	10	0.5 - 16	041 537	041 362	041 364
G 1 1/2	40	24	0.5 - 16	042 319	041 365	041 366
<b>Normally open</b>						
G 1/4	8	0.95	0.5 - 16	041 367	041 368	041 371
G 1/2	12	2.6	0.5 - 16	041 374	041 375	041 380

**Quick exhaust function:** Connection R is a orifice size larger than the ports A / B and P. This increases the flow A-R by a factor of 1.5 to 2 to the value in the table.

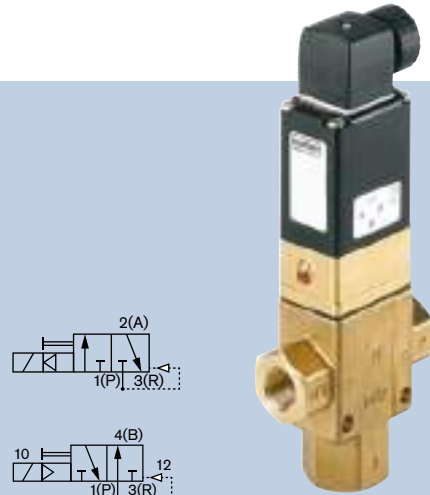


# 3/2-way Solenoid Valve with pivoted armature pilot drive for low pressures and vacuum

0344

## G 1/4" - G 1"

- Pivoted armature pilot drive, media isolated
- Smoothly operating servo-piston
- For neutral gases with low pressures
- For technical vacuum
- Manual override as standard



The pilot-controlled 3/2-way valve, Type 0344, with a smoothly operating servo-piston requires a differential pressure of 0.25 bar for complete opening and closing. In the circuit functions NC and NO, it is particularly suited for use with neutral gases with low pressures and for vacuum, even with dry running.

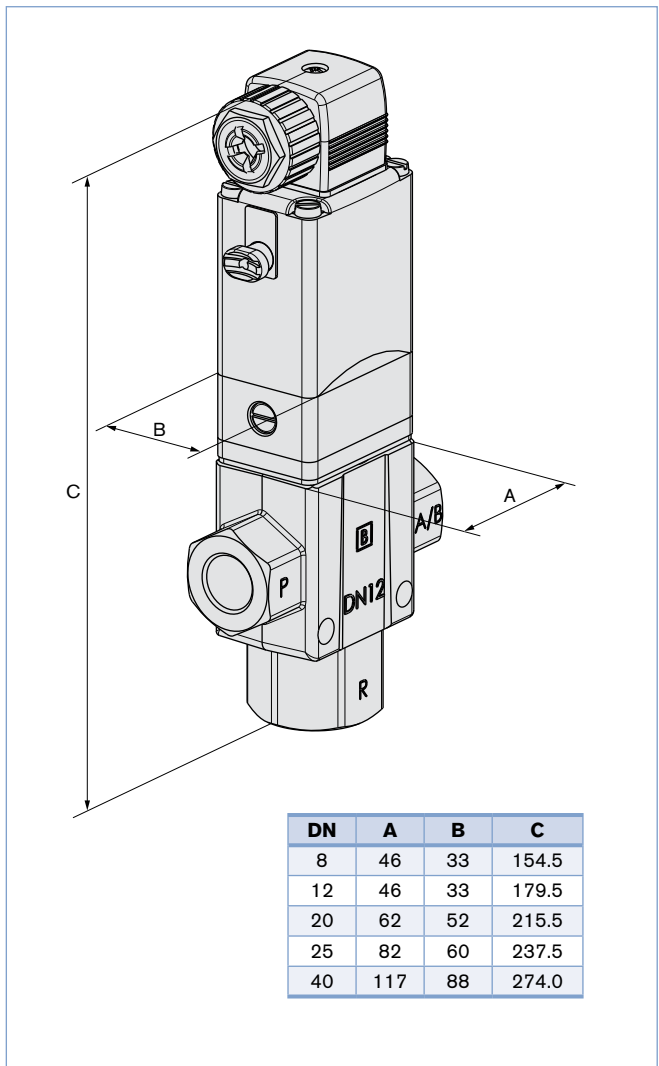
### Technical Data

<b>Orifice</b>	DN8.0-40 mm
<b>Body material</b>	Brass
<b>Coil material</b>	Epoxy
<b>Coil insulation class</b>	H
<b>Seal material</b>	NBR
<b>Medium</b>	Neutral gases, compressed air, vacuum
<b>Medium temperature</b>	0 °C to +90 °C
<b>Ambient temperature</b>	Max. +55 °C
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Cable plug for Ø 7 mm cable, acc. to DIN EN 175301-803 Form A (supplied as standard)
<b>Electr. power consumption</b>	DC: 8 W, AC: 30 VA (inrush), 15 VA (hold)
<b>Protection class</b>	IP 65 with cable plug
<b>Installation</b>	as required, preferably with actuator upright

Orifice [mm]	Response times <sup>1)</sup>	
	Opening [ms]	Closing [ms]
8	25	25
12	30	30
20	40	40
25	70	70
40	120	120

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
 Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

### Envelope Dimensions [mm]

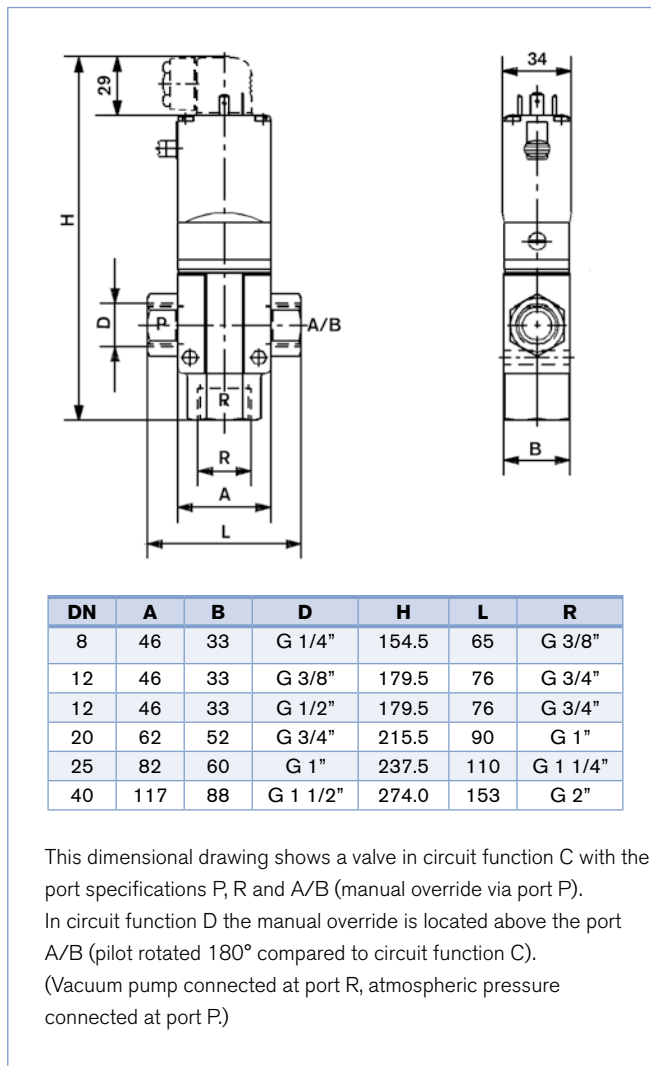


## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Qn-value air P → A [l/min]	Pressure range [bar]	Item no. per voltage/frequency [V/Hz]		
					024/DC	024/50	230/50
<b>All valves with manual override, brass body, NBR seal and cable plug</b>							
C 3/2-way valve normally closed	G 1/4	8	1030	Vacuum to 3	047 383	047 787	045 134
	G 1/2	12	2800	Vacuum to 3	046 580	047 897	046 180
	G 3/4	20	7200	Vacuum to 3	046 833	053 492	046 461
	G 1	25	11000	Vacuum to 3	043 691	050 367	055 445
	G 1 1/2	40	26000	Vacuum to 3	057 829	-	047 853
D 3/2-way valve normally open	G 1/4	8	1030	Vacuum to 3	046 986	049 336	046 408
	G 1/2	12	2800	Vacuum to 3	046 246	051 354	046 373
	G 3/4	20	7200	Vacuum to 3	046 087	057 636	047 616
	G 1	25	11000	Vacuum to 3	047 873	043 479	041 681

**Quick exhaust function:** Connection R is a orifice size larger than the ports A / B and P. This increases the flow A-R by a factor of 1.5 to 2 to the value in the table.

## Envelope Dimensions [mm]

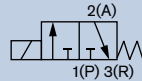


# Plunger Operated 3/2-way Solenoid Valve for high temperatures

0355

## G 1/4"

- Seat valve direct acting
- Medium temperature up to +180 °C
- Push-over solenoid system
- For gases and fluids

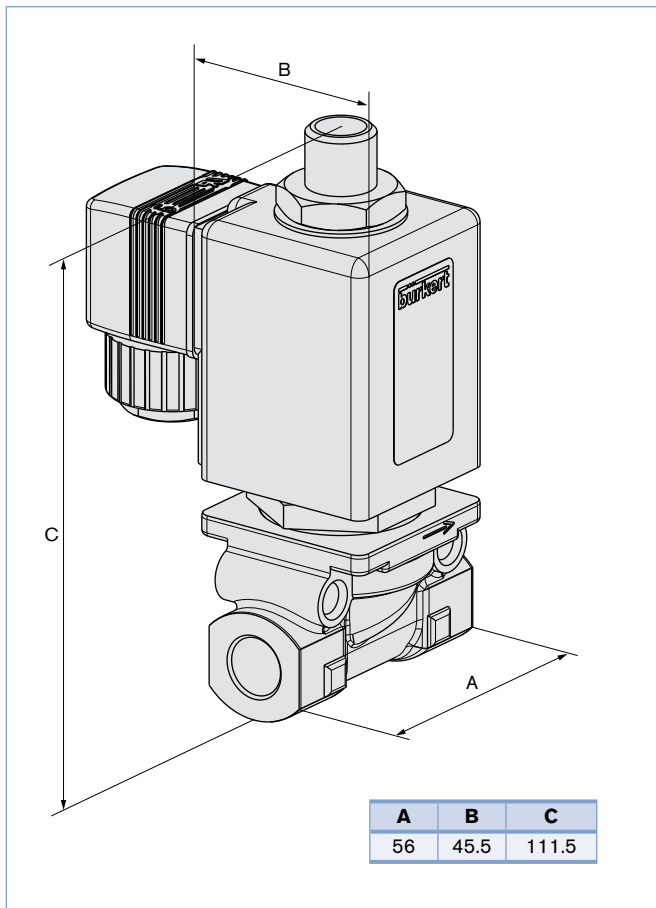


Direct-acting plunger solenoid, Type 355, for neutral gases and liquids. Also suitable for high temperatures, such as hot water, hot air, steam.

### Technical Data

<b>Orifice</b>	DN2-4 mm
<b>Body material</b>	Brass with stainless steel seat 1.4305, Stainless steel 1.4581
<b>Coil material</b>	Epoxy
<b>Coil isolation class</b>	H
<b>Inner part valve</b>	Stainless steel
<b>Seal material</b>	NBR, FKM, PTFE, EPDM
<b>Medium</b>	
NBR	Neutral fluids, hydraulic oil, oil without additives
EPDM	Oil and fat-free fluids
FKM	Per-solutions, hot oils with additives
PTFE	Steam, organic solvents
<b>Medium temperature</b>	
NBR	-10 °C to +90 °C
EPDM	-40 °C to +130 °C
FKM	0 °C to +130 °C
PTFE	-40 °C to +180 °C
<b>Ambient temperature</b>	Max. +55 °C
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (supplied as standard)
<b>Power consumption</b>	v
Inrush	
Hold (hot coil)	AC: 35-40cv VA AC: 16 VA, 10 W      DC: ca. 12 W
<b>Protection class</b>	IP 65 with cable plug
<b>Installation</b>	as required, preferably with actuator upright

### Envelope Dimensions [mm]



### Options

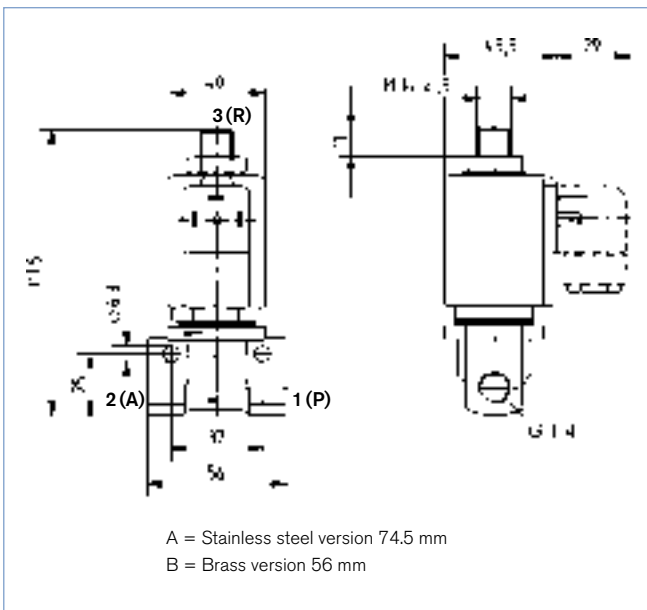
- Circuit function D and E on request
- UL, UR and CSA approval

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv-value water [m³/h]	Pressure range [bar]	Seal material	Item no. per voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
C 3/2-way valve normally closed	<b>Brass body</b>							
	G 1/4	2	0.11	0 - 16	EPDM	-	150 300	066 007
					NBR	043 089	026 069	068 078
					PTFE	062 188	049 998	049 025
		3	0.2	0 - 10	FKM	064 392	157 603	126 056
					NBR	068 557	017 668	061 174
					PTFE	052 665	067 817	054 885
		4	0.4	0 - 6	FKM	069 637	066 454	046 655
					NBR	061 104	019 095	061 019
					PTFE	052 078	065 552	058 403
	<b>Stainless steel body</b>							
	G 1/4	4	0.4	0 - 5	PTFE	018 478	136 558	021 253
				0 - 6	FKM	020 978	062 713	066 759

0355

## Envelope Dimensions [mm]

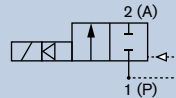
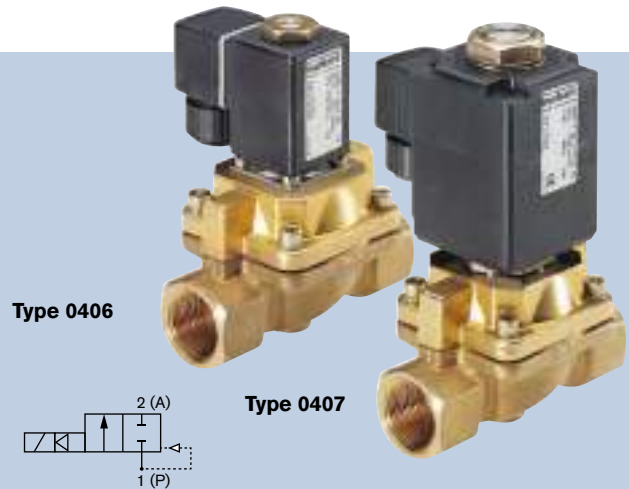


## 2/2-way Piston Solenoid Valves for Steam (up to +180 °C)

0406 / 0407

### G 1/2" - G 2"

- Type 0406 pilot controlled, 1-12 bar max.
- Type 0407 forced coupled, 0-10 bar max.
- Fluid temperature to 180 °C
- Wear resistant stainless steel seat
- Most reliable valves for hot neutral fluids



The normally closed solenoid valves is suitable for steam and hot gaseous mediums.

Type 0406 is a pilot operated solenoid valve with servo piston. To fully open a minimum pressure difference of 1 bar is required.

Type 0407 is a force lifting solenoid valve with servo piston. The valve opens without differential pressure from zero bar.

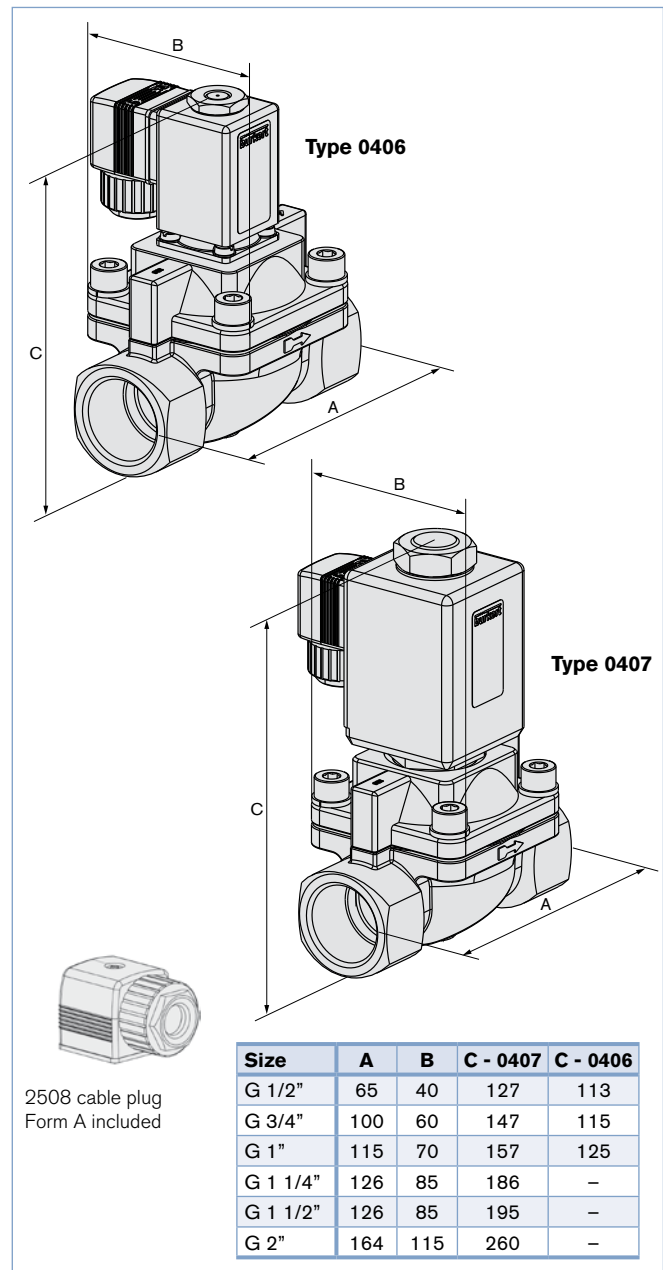
### Technical Data

<b>Pressure range</b>	1-12 bar (Type 0406) 0-10 bar (Type 0407)
<b>Temperature media</b>	Type 0406: -10 °C to +180 °C Type 0407: -20 °C to +180 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	Brass with anti-wear stainless valve seat
<b>Seal material</b>	PTFE piston seal, graphite body seal
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	Type 0406: AC: 21 VA (inrush), 12 VA (hold) DC: 8 W Type 0407: AC: DN13-40 mm, 100 VA (inrush), 35 VA/14 W (hold) DC: DN13 mm 12 W, DN20-40 mm 14 W, DN50 mm 30 W
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Form A (included)

### Options

- Cable plug with LED and varistor
- UL Listed version with 2509 cable plug
- UR and CSA approval
- Flange version in cast iron

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug  
Form A included

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			DC	50 Hz	024/DC	024/50	230/50
<b>Normally closed (other versions on request)</b>							
<b>Type 0406</b>							
G 1/2	13	3-Jul	1 - 4	1 - 12	019 310	020 541	061 305
G 3/4	20	5	1 - 4	1 - 12	021 004	019 818	061 303
G 1	25	10	1 - 4	1 - 12	019 983	021 440	061 304

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			DC	50 Hz	024/DC	024/50	230/50
<b>Normally closed (other versions on request)</b>							
<b>Type 0407</b>							
G 1/2	13	3-Jul	0 - 10	0 - 10	125 542	021 598	615 637
G 3/4	20	5	0 - 10	0 - 10	150 311	022 032	615 157
G 1	25	10	0 - 10	0 - 10	174 745	021 620	615 638
G 1 1/4	32	16	0 - 8	0 - 10	258 322	085 385	064 919
G 1 1/2	40	16	0 - 10	0 - 10	226 757	085 392	085 394
G 2	50	36	0 - 10	0 - 10	085 400	-	-

# Solenoid Valve Timer Units

1078-1 / 1078-2

## Time interval from 0.5sec to 10hr

- Programmable alone or using separate operating unit
- Various switching functions
- Safety function with Type 1078-2



Type 1078-2 and 1077-2



Type 1078-1

(Figure Types 1078-2 and 1077-2 mounted on solenoid valve - assembly example)

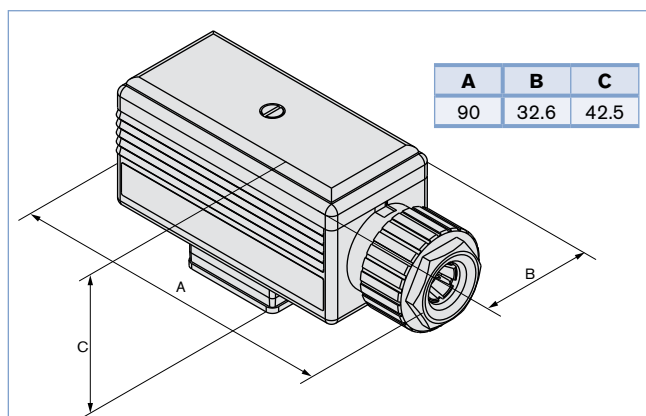
Type 1078-1 is simply programmed by DIP switches and potentiometers and incorporates four different switching functions. It mounts directly onto Bürkert solenoid valves using the same three prong connection. This unit is perfect for simple tasks like compressor blowdown where reliability is required.

Type 1078-2, which has eight different switching functions, is operated by a two button programmer (Type 1077-2) with a small digital display. As changes are only possible via the programmer the unit is safely locked when it is removed. Multiple timers can simply be programmed as the last settings always remain in Type 1077-2.

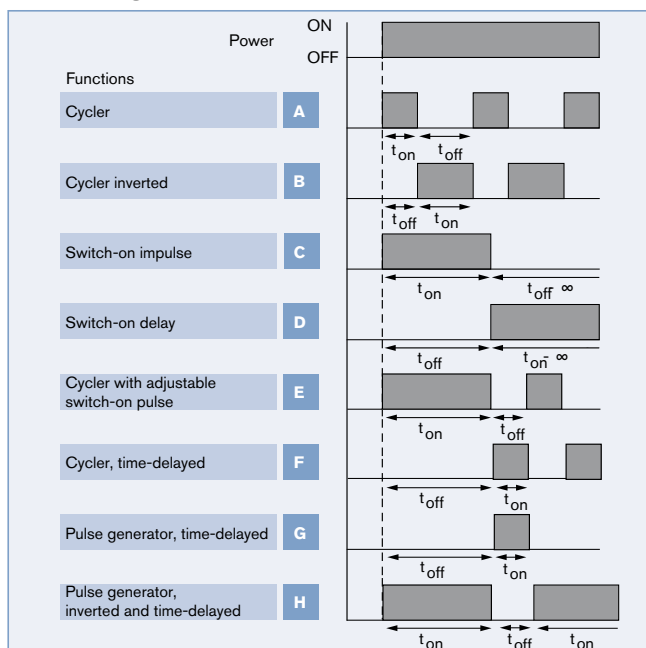
## Technical Data

<b>Time range</b>	0.5 s-10 s up to 0.5 h-10 h
<b>Display</b>	LED for power supply voltage and switching status
<b>Adjustment 1078-1</b>	DIP-switches, precision adjustment of response times via potentiometers
<b>Adjustment 1078-2</b>	Two buttons via 1077-2 programmer (not included)
<b>Switching functions</b>	Type 1078-1 A-D Type 1078-2 A-H
<b>Body material</b>	Polyamide
<b>Operating voltages</b>	See ordering chart
<b>Voltage tolerance</b>	±10%
<b>Power consumption</b>	Max. 1.5 W
<b>Ingress protection</b>	IP65 (NEMA4)
<b>Plug connection</b>	Integrated cable plug acc. to DIN EN 175301-803, Form A
<b>Switching load (Imax)</b>	2 A at supply voltage 12 DC. 1.5 A at supply voltage 24-48 V/50-60 Hz and DC
<b>Electrical connection</b>	5-pin terminal strip in housing, cable gland, up to 1.5 mm <sup>2</sup> wire, cable Ø 6-7 mm, rotatable by 90°
<b>Cable outlet</b>	4 x 90° positioning
<b>Working temperature range</b>	-10 °C to +60 °C
<b>Influence of temperature</b>	±5 % of full scale time range
<b>Influence of voltage</b>	±1 % of full scale time range
<b>Resolution (Type 1078-2)</b>	Range up to 199 s - 10 ms Range up to 199 min - 1 s Range up to 99 h - 1 min
<b>Additional functions (Type 1078-2)</b>	Binary inputs for external triggering
<b>1077-2 Display</b>	4.5 digit 7 segment LCD
<b>1077-2 Adjustment</b>	Two buttons
<b>1077-2 Body material</b>	Polyamide
<b>1077-2 Ingress protection</b>	IP65 (with valve)

## Envelope Dimensions [mm] (see datasheet for details)



## Switching functions



## Options

- Unit for max. time 100 h (option NA15)
- 110-230 V/50-60 Hz

## Ordering Chart

Description	Operating voltage	Item no.
<b>Type 1078-1</b>		
Timer unit Type 1078-1 with standard time range	012 - 024 V DC	060 647
	024 - 048 V / 50 - 60 Hz and DC	060 621
<b>Type 1078-2</b>		
Timer unit Type 1078-2	012 - 024 V DC	060 648
Timer unit Type 1078-2	024 - 048 V / 50 - 60 Hz and DC	060 629
Operating unit Type 1077-2		060 638

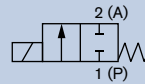


## 2/2-way Solenoid valve for high pressure

2400

### G 1/2" - G 1/2"

- For high pressures
- Servo-assisted
- Normally closed (normally open on request)



The servo-assisted 2400 valve has a servo-piston with a 2-way servo-control. It is designed for high pressures.

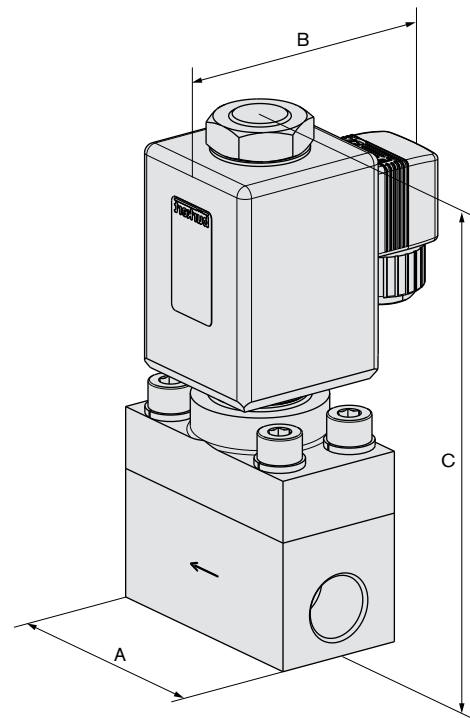
The speciality of this valve design lies in the layout of the seat and sealing element. An additional radial seal make very good sealing possible.

The tapered sealing element of the servo-control permits the switching of high pressure at relatively low coil power.

### Technical Data

<b>Body material</b>	stainless steel, brass
<b>Valve internals</b>	stainless steel
<b>Sealing material</b>	PEEK/FKM; PCTFE/FKM; PTFE/FKM
<b>Media</b>	neutral gases and fluids
<b>Medium temperature</b>	
PEEK/FKM	-10 to +80 °C
PCTFE/FKM	-10 to +80 °C
PTFE/FKM	-10 to +80 °C
<b>Ambient temperature</b>	max. +55 °C
<b>Viscosity</b>	ca. 21 mm/s
<b>Operating voltage</b>	24/DC 24/220-230 V / 50 Hz other voltages on request
<b>Voltage tolerance</b>	±10%
<b>Cycling rate</b>	ca. 80/min
<b>Duty cycle</b>	100 % continuous rating
<b>Electrical connection</b>	Cable plug Type 2508 acc. to DIN EN 175301-803, Form A (included)
<b>Protection class</b>	IP65 with cable plug
<b>Installation</b>	as required, preferably with actuator upright

### Envelope Dimensions [mm]



DN	A	B	C
5.0	50	81	126
8.0	65	81	126
12.0	75	81	153

Orifice [mm]	Electrical power consumption		Response times <sup>1)</sup>		
	Inrush	Hold	Opening [ms]	Closing [ms]	
5.0	AC	85 VA	48 VA/20 W	100	300
8.0				to	to
12.0	DC	20 W	20 W	200	500

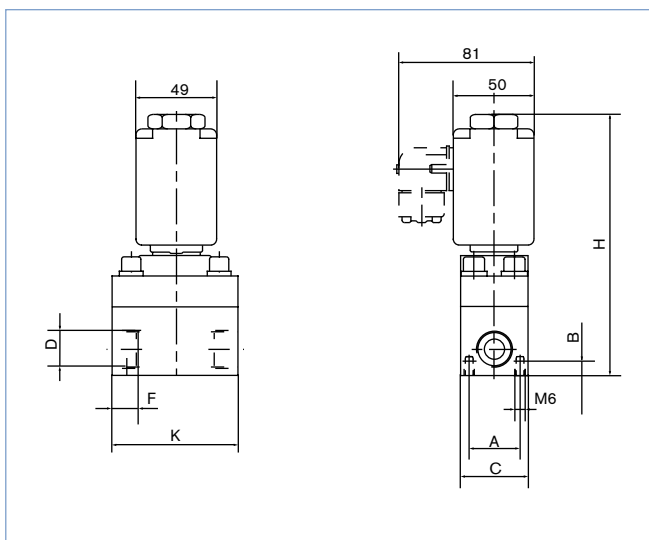
<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

## Ordering Chart

Circuit function	Orifice [mm]	Port connection [inch]	Kv value [m³/h]	Pressure range [bar]	Body material	Seal material	Voltage/frequency [V/Hz]	Item no.
A Normally closed	5	G 1/4	0.6	1 – 200	Brass	PEEK / FKM	024/DC	002 366
				1 – 250	Brass	PEEK / FKM	230/50	002 367
	8	G 3/8	1	1 – 210	Brass	PEEK / FKM	024/DC	002 369
				1 – 250	Brass	PEEK / FKM	024/50	132 436
	PEEK / FKM	230/50	002 370					
	12	G 1/2	2.6	1 – 250	Stainless steel	PCTFE / FKM	024/DC	000 520
							024/50	134 690
							230/50	000 422
				1 – 160	Brass	PTFE / FKM	024/DC	006 725
							024/50	000 284
230/50							000 455	

2400

## Envelope Dimensions [mm]



DN	D	A	B	C	F	H	K
5.0	G 1/4"	30	12	50	8	126	50
8.0	G 3/8"	29	8	40	8	126	65
12.0	G 1/2"	29	8	40	14	153	75

# Cable plug acc. to DIN EN 175301 Form A Type 2508, Form B Type 2507 and Rectangular plug Type 2505

2505 / 2507 / 2508

## 0 to 250 V AC

- Compact and simple to wire
- IP65 / NEMA 4X
- Also available with LED indicator
- Global Approvals



### Type 2505 – Rectangular plug

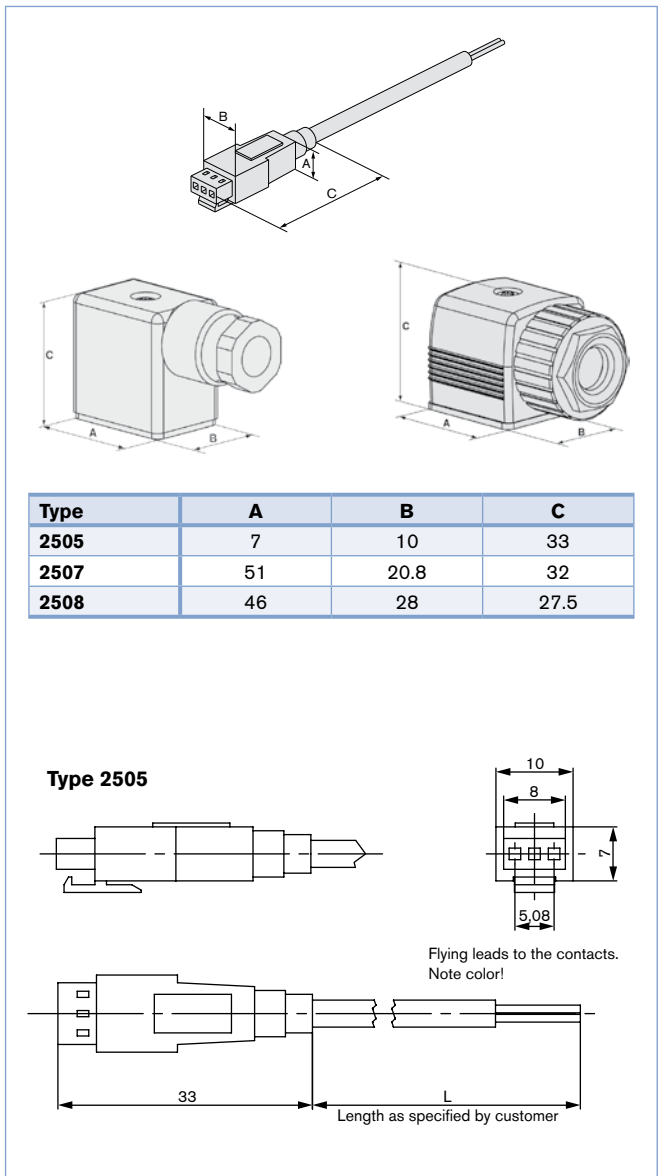
**Type 2507** - Plug on connector for small valves and sensors. Options include LED, rectifier, suppression diode, and varistor. Modular flexible design allows flexibility in restricted space; watertight connection.

**Type 2508** - Plug on connector for solenoid valves and sensors. Options include LED, rectifier, varistor and AS-i versions (2510 / 2511). The flexible design allows 90° installation flexibility.

### Technical Data

Type	2505	2507	2508
<b>Body material</b>	POM	Polyamide	Polyamide, Polycarbonate (versions with LED)
<b>Contacts</b>	Brass galvanised silver plated	Brass galvanised silver plated	Brass galvanised silver plated
<b>Flat seal</b>		NBR	
<b>Cable outlet</b>	straight	2 x 180°	4 x 90°
<b>Cable diameter</b>	see ordering chart	4.5-7 mm	6-7 mm
<b>Temperature range</b>	-40 °C to +90 °C	-40 °C to +90 °C	+90 °C
<b>Max. ambient temperature</b>	+90 °C	+90 °C	+90 °C
<b>Rating</b>	see ordering chart	6 A	6 A
<b>Nominal voltage</b>	12-24 V	0-250 V	0-250 V
<b>Contact resistance</b>		≤ 4 mΩ	5 mΩ (typ.)
<b>Operating display</b>		Option LED red	Option LED red
<b>Electrical connection</b>		Screw terminal max. 0.75 mm <sup>2</sup> with circuitry (max. 1.5 mm <sup>2</sup> without circuitry)	Screw terminal max. 1.5 mm <sup>2</sup>
<b>Protection class</b>	IP20	NEMA 4, IP65	NEMA 4, IP65
<b>Number of terminals</b>	2-wire	2-pins + protective earth conductor	Standard: 2-pins + protective earth conductor. Option: 3-pins + protective earth conductor

### Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

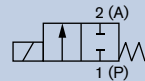
Circuitry	Voltage/frequency	Item no. 2507	Item no. 2508
Standard	0 - 250/AC/DC	423 845	008 376
With LED	024/DC	423 849	008 360
	110/AC	-	008 361
	230/AC	423 850	008 362
With LED and varistor	024/DC	423 851	008 367
	110/AC	-	008 368
	230/AC	-	008 369

Type 2505	Feature	Item no.
Rectangular cable plug	with 3 m PVC oil-resistant cable, cable diameter 4-5 mm, operating temperature -20 to +80 °C, current intensity max. 1.5 A	133 486
	with 300 mm single flying leads, outside diameter 1.4 mm, operating temperature 0 to 55 °C, power max. 3 W	644 068
	with 2 crimp contacts, operating temperature 0 to 55 °C, current intensity max. 2 A	644 067

## 2/2-way Solenoid Valve for low and high temperatures

2610

- Medium separation
- Metal bellow system in stainless steel
- High quality PTFE seat seal
- Medium temperature -200 °C to +180 °C
- Energy saving „Kick and Drop” electronic



The direct-acting valve, Type 2610, is delivered with a normally closed circuit function. The thermal isolation of the coil and housing by means of stainless steel bellows allows the extreme medium temperature. In this way condensation or an unacceptable heating up of the coil is avoided. The supplied cable head contains a „kick and drop” electronic that supports the opening phase and afterwards reduction of the opening holding power.

### Technical Data

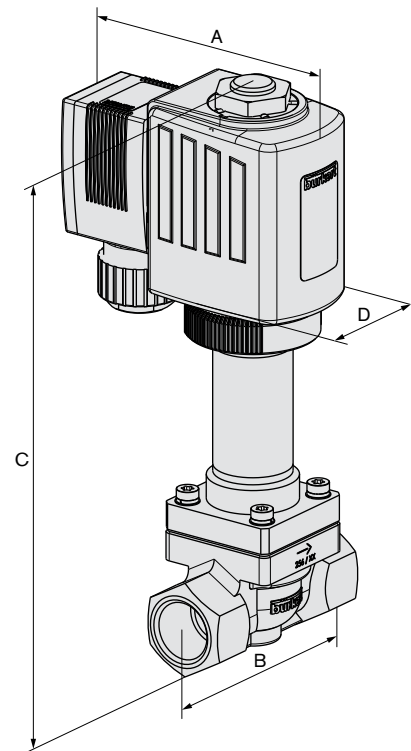
<b>Body material</b>	Brass with stainless steel seat 1.4581 Stainless steel body and stainless steel seat 1.4581
<b>Metal bellows</b>	Stainless steel 1.4541
<b>Seal material</b>	PTFE
<b>Medium</b>	Neutral gases and liquids
<b>Medium temperature</b>	-200 °C to +180 °C
<b>Ambient temperature</b>	Max. +50 °C
<b>Viscosity</b>	Approx. 21 mm <sup>2</sup> /s
<b>Operating voltages</b>	24/110 V UC 220-230 V UC
<b>Voltage tolerance</b>	Max. ±10%
<b>Cycling rate</b>	10/min
<b>Power consumption</b>	Kick and Drop electronic 72/4 W
<b>Duty cycle</b>	Continuous operation 100% ED
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Type 2508, for Ø 7 mm cable (included in delivery)
<b>Protection class</b>	IP65 with cable plug
<b>Installation position</b>	As required, preferably with actuator upright
<b>Weight</b>	1.1 kg
<b>Response times <sup>1)</sup></b>	
Opening	100 to 200 ms
Closing	300 to 500 ms

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C

Opening: pressure relief 0 to 90%

Closing: pressure relief 100 to 10%

### Envelope Dimensions [mm]



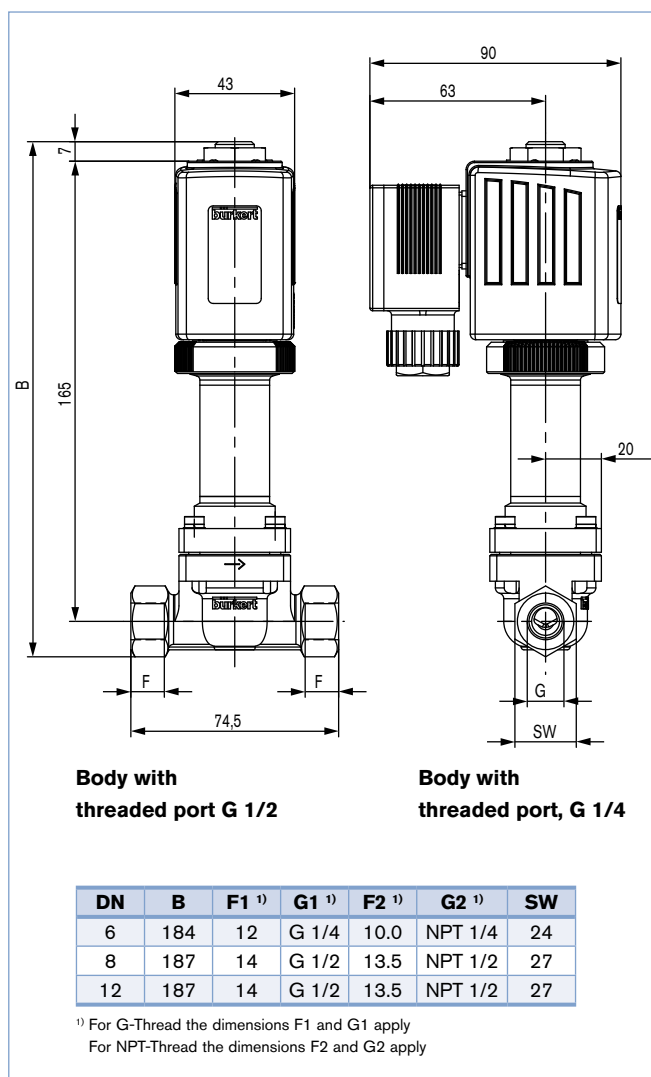
DN	A	B	C	D
6	90	74.5	184	43
8	90	74.5	187	43
12	90	74.5	187	43

## Ordering Chart

Circuit function	Orifice [mm]	Port connection [inch]	Kv value [m <sup>3</sup> /h]	Pressure range [bar]	Voltage/frequency V/Hz	Item no.
2/2-way normally closed	6	G 1/4	0.8	0 - 10	024/UC	167 737
	6	G 1/4	0.8	0 - 10	230/UC	167 739
	8	G 1/2	0.9	0 - 10	024/UC	167 740
	8	G 1/2	0.9	0 - 10	230/UC	167 742
	12	G 1/2	1.8	0 - 3.5	024/UC	167 743
	12	G 1/2	1.8	0 - 3.5	230/UC	167 745

2610

## Envelope Dimensions [mm]

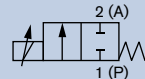


## 2/2-way Proportional Valve

2871

### G 1/8", DN0.3-2.0 mm

- Excellent range
- Very good repeatability
- Compact Design



The direct-acting solenoid control valve, Type 2871 (20 mm installation width), is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight, up to the DN specific nominal pressure.

The operation lever of the valve is suspended frictionless, which leads to an extraordinary adjustment characteristic. Valve control takes place through a PWM signal (see control electronics, Type 8605).

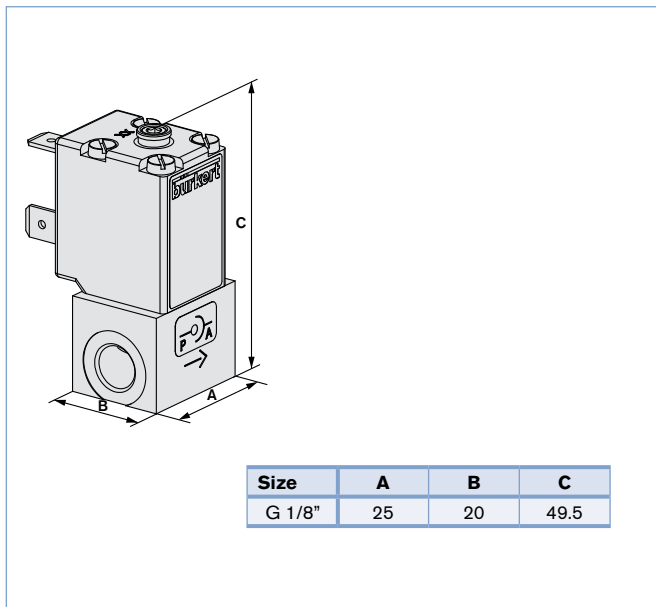
### Technical data

<b>Body material</b>	Brass, stainless steel
<b>Medium</b>	Neutral gases, liquids on request
<b>Span</b>	1 : 200 Responsivity 0.25% of full scale
<b>Response sensitivity</b>	0.25% of full scale
<b>PWM frequency</b>	1500 Hz
<b>Max. coil current</b>	220 mA (Maximum value, value depends on the operating pressure)
<b>Medium temperature</b>	-10 °C to 90 °C
<b>Duty cycle</b>	100% continuously rated
<b>Ambient temperature</b>	Max. 55 °C
<b>Seal material</b>	FKM
<b>Operating voltages</b>	24V DC
<b>Power consumption</b>	2 W (to DN0.6), 5 W (from DN0.8)
<b>Electrical connection</b>	Cable Plug Type 2507 acc. to Form B Industrial standard (not included)
<b>Typical control data<sup>1)</sup> at PWM control</b>	
Hysteresis	
Repeatability	< 5%
Sensitivity	< 0.25% F.S. <sup>2)</sup>
Span	< 0.25% F.S. – < 0.1% F.S. with DN < 0.8 mm <sup>2)</sup>
Response time (10-90%)	1:200 (DN0.8-2), 1:500 (DN0.05-0.6) < 15 ms
<b>Protection class</b>	IP65 (with cable plug)

<sup>1)</sup> Characteristic data of control behaviour depends on process conditions

<sup>2)</sup> by flow measurement

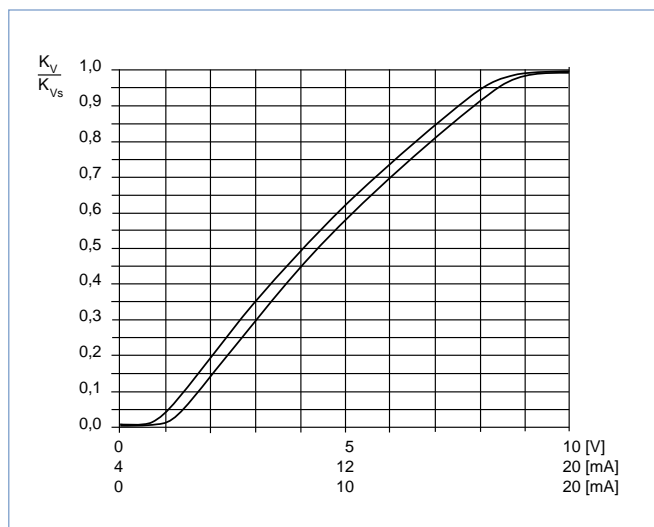
### Dimensions [mm] (see datasheet for further Details)



### Options/Accessories

- Seal material EPDM
- 12V coil
- Coil with 30 cm flying leads
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange

## Characteristics of a proportional valve



## Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

**Recommended value:  $\Delta p_{\text{valve}} > 25\%$  of total pressure drop within the system**

Otherwise, the ideal, linear valve curve characteristic is changed. If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.

For that reason take advantage of Bürkert competent engineering services during the planning phase!

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Nominal pressure [bar(ü)]	Max. differential pressure [bar]	Max. coil current [mA]	Item no.	
						Brass	Stainless steel
G 1/8	0.3	0.002	10	10	90	254 451	254 452
G 1/8	0.4	0.004	8	8	90	254 453	254 454
G 1/8	0.6	0.01	6	6	90	254 455	254 457
G 1/8	0.8	0.018	12	6	220	235 994	235 995
G 1/8	1.0	0.027	10	5	220	236 000	236 001
G 1/8	1.2	0.038	8	4	220	236 261	236 262
G 1/8	1.6	0.055	6	3	220	236 267	236 268
G 1/8	2.0	0.09	3	1.5	220	236 273	236 274

## Accessories

Description	Item no.
<b>Type 2871</b>	
Control electronics Type 8605, DIN-Rail version	178 362
<b>Type 2507</b>	
Cable plug	423 845

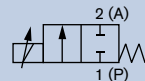


## 2/2-way Proportional Valve

2873

### G 1/8" and G 1/4", DN0.8-4.0 mm

- Excellent range
- Very good repeatability
- Compact Design



The direct-acting solenoid control valve, Type 2873 (32 mm installation width) is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight, up to the DN specific nominal pressure.

The operation lever of the valve is suspended frictionless, which leads to an extraordinary adjustment characteristic. Valve control takes place through a PWM signal (see control electronics, Type 8605).

### Technical data

<b>Body material</b>	Brass, stainless steel
<b>Medium</b>	Neutral gases, liquids on request
<b>Span</b>	1 : 200
<b>Response sensitivity</b>	0.25% of full scale
<b>Rotation time</b>	<20 ms
<b>PWM frequency</b>	1200 Hz
<b>Medium temperature</b>	-10 °C to 90 °C
<b>Ambient temperature</b>	Max. 55 °C
<b>Seal material</b>	FKM
<b>Operating voltages</b>	24 V DC
<b>Power consumption</b>	9 W
<b>Max. coil current<sup>1)</sup></b>	420 mA
<b>Duty cycle</b>	100 % continuously rated
<b>Electrical connection</b>	Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included)
<b>Typical control data<sup>2)</sup></b>	
<b>at PWM control</b>	
Hysteresis	<5 %
Repeatability	< 0.5 % F.S. <sup>3)</sup>
<b>Protection class</b>	IP65 (with cable plug)

<sup>1)</sup> Maximum value, value depends on operating pressure

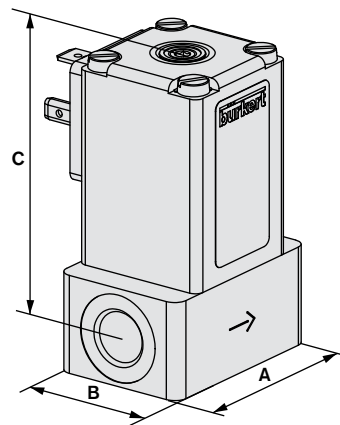
<sup>2)</sup> Characteristic data of control behaviour depends on process conditions

<sup>3)</sup> by flow measurement

### Options/Accessories

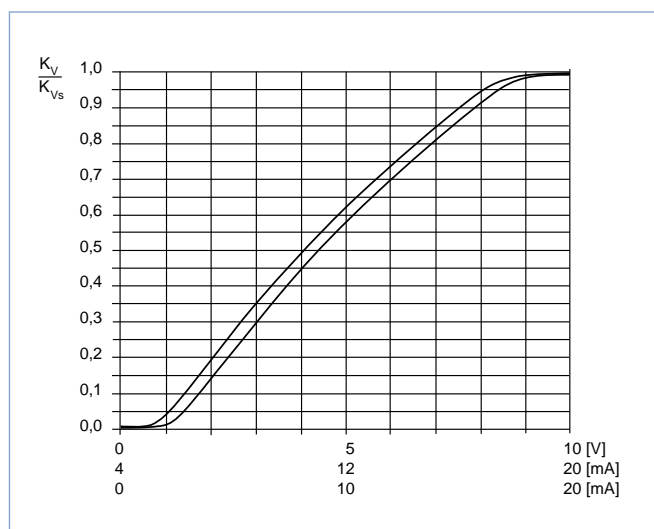
- Seal material EPDM
- 12V coil
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange

### Dimensions [mm] (see datasheet for further Details)



Size	A	B	C
G 1/8"	32	32	57
G 1/4"	32	46	69.5

## Characteristics of a proportional valve



## Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

**Recommended value:  $\Delta p_{\text{valve}} > 25\%$  of total pressure drop within the system**

Otherwise, the ideal, linear valve curve characteristic is changed. If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.

For that reason take advantage of Bürkert competent engineering services during the planning phase!

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Nominal pressure [bar(ü)]	Max. differential pressure [bar]	Max. coil current [mA]	Item no.	
						Brass	Stainless steel
<b>Type 2873</b>							
G 1/8	0.8	0.018	16	8	420	234 289	234 305
G 1/8	1.2	0.04	12	6	420	234 292	234 307
G 1/8	1.5	0.06	10	5	420	234 294	234 309
G 1/4	2	0.1	8	4	420	234 297	234 312
G 1/4	2.5	0.15	5	2.5	420	234 299	234 314
G 1/4	3	0.22	3.5	1.8	420	234 301	234 316
G 1/4	4	0.32	2	1	420	234 303	234 318

## Accessories

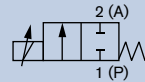
Description	Item no.
Control electronics Type 8605, DIN-Rail version	178 363
Control electronics Type 8605, cable plug with PG-connection	178 354
Control electronics Type 8605, cable plug with M12-connection	178 355
Cable 5 m for Type 8605, M12-connection	918 038
Cable plug Type 2508	008 376
Cable plug Type 2508 with 3 m cable	783 573

## 2/2-way Proportional Valve

2875

### G 3/8" and G 1/2", DN2.0-8.0 mm

- Excellent range
- Very good repeatability
- Compact Design



The direct-acting solenoid control valve, Type 2875, (49 mm installation width) is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight, up to the DN specific nominal pressure.

The operation lever of the valve is suspended frictionless, which leads to an extraordinary adjustment characteristic. Valve control takes place through a PWM signal (see control electronics, Type 8605).

### Technical data

<b>Body material</b>	Brass, stainless steel
<b>Medium</b>	Neutral gases, liquids on request
<b>Span</b>	1 : 200
<b>Response sensitivity</b>	0.25% of full scale
<b>Rotation time</b>	< 25 ms
<b>PWM frequency</b>	900 Hz
<b>Medium temperature</b>	-10 °C to 90 °C
<b>Ambient temperature</b>	Max. 55 °C
<b>Seal material</b>	FKM
<b>Operating voltages</b>	24 V DC
<b>Power consumption</b>	16 W
<b>Max. coil current<sup>1)</sup></b>	420 mA
<b>Duty cycle</b>	100 % continuously rated
<b>Electrical connection</b>	Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included)
<b>Typical control data<sup>2)</sup></b>	
<b>at PWM control</b>	
Hysteresis	< 5 %
Repeatability	< 0.5 % F.S. <sup>3)</sup>
<b>Protection class</b>	IP65 (with Cable Plug)

<sup>1)</sup> Maximum value, value depends on operating pressure

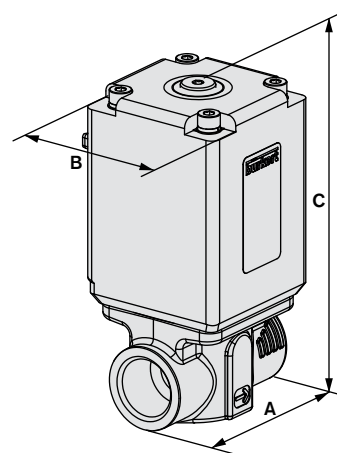
<sup>2)</sup> Characteristic data of control behaviour depends on process conditions

<sup>3)</sup> by flow measurement

### Options/Accessories

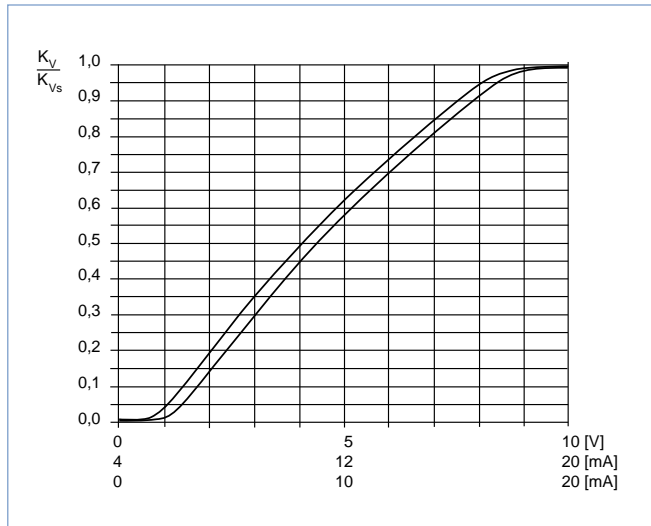
- Seal material EPDM
- 12 V coil
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange

### Dimensions [mm] (see datasheet for further Details)



Size	A	B	C
G 3/8"	55	49	106
G 1/2"	55	49	106

## Characteristics of a proportional valve



## Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

**Recommended value:  $\Delta p_{\text{valve}} > 25\%$  of total pressure drop within the system**

Otherwise, the ideal, linear valve curve characteristic is changed. If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.

For that reason take advantage of Bürkert competent engineering services during the planning phase!

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Nominal pressure [bar(ü)]	Max. differential pressure [bar]	Max. coil current [mA]	Item no.	
						Brass	Stainless steel
<b>Type 2875</b>							
G 3/8	2	0.12	25	13	750	236 897	236 899
G 3/8	3	0.25	10	5	750	236 901	236 903
G 3/8	4	0.45	8	4	750	236 905	236 910
G 1/2	6	0.8	4	2	750	236 915	236 919
G 1/2	8	1-Jan	2	1	750	236 922	236 924

## Accessories

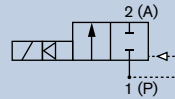
Description	Item no.
Control electronics Type 8605, DIN-Rail version	178 363
Control electronics Type 8605, cable plug with PG-connection	178 354
Control electronics Type 8605, cable plug with M12-connection	178 355
Cable 5 m for Type 8605, M12-connection	918 038
Cable plug Type 2508	008 376
Cable plug Type 2508 with 3 m cable	783 573

# 2/2-way Servo-Assisted Solenoid Valve with Isolated Pilot

5282

## G 1/2" - G 2"

- Unique isolated technology for slightly contaminated fluids
- Independently adjustable open / close rate
- Easily configurable for normally open
- Manual override



Completely unique servo-assisted solenoid valve with isolated pivoted armature pilot. This valve design is much less sensitive to fluid contamination than plunger operated valves and therefore offers many advantages in the process environment. The pilot section can be rotated in the field to make the valve normally open.

### Technical Data

<b>Pressure range</b>	0.2-10 bar
<b>Temperature media</b>	0 °C to +90 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	Brass acc. to DIN EN 50930-6 or Stainless steel 1.4581
<b>Seal material</b>	NBR, FKM (EPDM on request)
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	DC: 8 W, AC: 24 VA (inrush), 14 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803, Type 2508, Form A (not included)

To open the full cross-section a pressure difference of 0.5 bar is required.  
The switching times can be changed by turning the flow control screw (on the cover).

Response times <sup>1)</sup>	
Opening [s]	Closing [s]
0.1-0.8	1.0-4.0

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

### Options

- Normally open
- Electrical position feedback
- Impulse coil
- Class 1, Div 2 FM & CSA
- Ex-version available

### Envelope Dimensions [mm] (see datasheet for details)

2508 cable plug Form A not included

Drawing shows brass version

DN	Size	A	B	C
13	G 1/2"	65	40	123
20	G 3/4"	100	60	131
25	G 1"	115	70	141
32	G 1 1/4"	126	85	147
40	G 1 1/2"	126	85	156
50	2"	164	115	177.5

## Ordering Chart

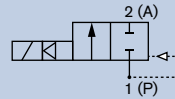
Port connection [inch]	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Pressure range [bar]	Seal material	Item no. voltage/frequency [V/Hz]		
					024/DC	024/50-60	230/50-60
<b>Normally closed (other versions on request)</b>							
<b>Brass</b>							
G 1/2	13	4	0.2 - 10	NBR	134 430	134 431	134 433
G 3/4	20	5	0.2 - 10	NBR	134 434	134 435	134 437
G 1	25	10	0.2 - 10	NBR	134 438	134 439	134 441
G 1 1/4	32	20	0.2 - 10	NBR	134 442	134 443	134 445
G 1 1/2	40	20	0.2 - 10	NBR	134 446	134 447	134 449
G 2	50	40	0.2 - 10	NBR	134 450	134 451	134 453
<b>Stainless steel</b>							
G 1/2	20	4	0.2 - 10	FKM	134 514	134 515	134 517
G 3/4	20	5	0.2 - 10	FKM	134 518	134 519	134 521
G 1	25	10	0.2 - 10	FKM	134 522	134 523	134 525
G 1 1/4	32	20	0.2 - 10	FKM	134 526	134 527	134 529
G 1 1/2	40	20	0.2 - 10	FKM	134 530	134 531	134 533
G 2	50	40	0.2 - 10	FKM	134 534	134 535	134 537

## 2/2-way Solenoid Valve with servo piston for high pressures

5404

### G 1/2" - G 1"

- Unaffected by pressure surges
- Piston design for high reliability
- Perfect for compressed gases



Servo-assisted solenoid valve with a plunger piloted piston seal. Employ where reliable, stable control of neutral gases at pressure is required. To switch a minimum pressure difference of 1 bar is required.

### Technical Data

<b>Temperature media</b>	-10 °C to +90 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	Brass
<b>Seal material</b>	PTFE, PTFE seat seal + NBR (FKM on request)
<b>Coil material</b>	Polyamide
<b>Power consumption</b>	DC: 8 W, AC: 24 VA (inrush), 14 VA (hold)
<b>Insulation class</b>	Coil B (H on request)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803 Type 2508 Form A (not included)

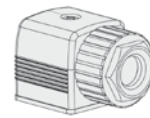
Opening [ms]	Response times <sup>1)</sup>	
	Closing [ms]	
20-400	100-1500 (depending on orifice and differential pressure)	

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

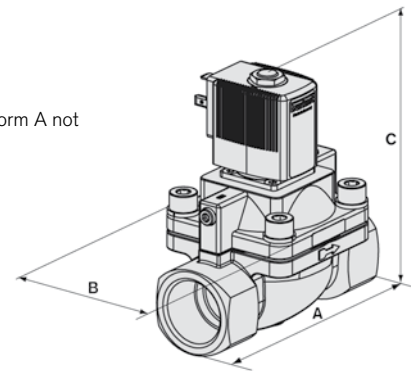
### Options

- Normally open
- Cable plug with LED and varistor
- UL, UR and CSA approvals
- ATEX approvals

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A not included



Size	A	B	C
G 1/2"	65	32	96.5
G 3/4"	100	60	109
G 1"	115	70	119

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			for liquids	for gases	024/DC	024/50	230/50
<b>Normally closed (other versions on request)</b>							
G 1/2	12	2	1 - 50	1 - 50	134 590	134 591	134 593
G 3/4	20	5	1 - 25	1 - 32	134 594	-	-
			1 - 25	1 - 40	-	134 595	134 597
G 1	25	10	1 - 25	1 - 32	134 598	-	-
			1 - 25	1 - 40	-	134 599	134 601

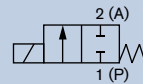


# Plunger Operated 2/2-way Solenoid Valve

6011

## G 1/8" or manifold mounting

- Brass or Stainless steel
- FKM seal as standard
- Slip over coil can be rotated in 4 x 90 degrees



Direct-acting miniature solenoid valve which is plunger operated for neutral gases, liquids and technical vacuum. Available in standalone or manifold mount versions, there is also an "analysis" version which is manufactured under cleanroom conditions.

### Technical Data

<b>Temperature media</b>	-10 °C to +100 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Body material</b>	Brass or stainless steel 1.4305
<b>Seal material</b>	FKM
<b>Coil material</b>	Epoxy (Class H)
<b>Viscosity</b>	max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	
Single valve	100% continuous rating
for block mounting on sub-base	Intermittent 60% (30 min)
<b>Power consumption</b>	DC: 4 W, AC: 9 VA (inrush), 6 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug Type 2507 Form B Industry standard (not included)

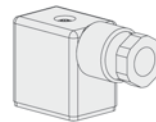
Orifice [mm]	Response times <sup>1)</sup>	
	Opening [ms]	Closing [ms]
1.2	7-10	10-15
1.6		
2.0	7-12	7-12
2.4		

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

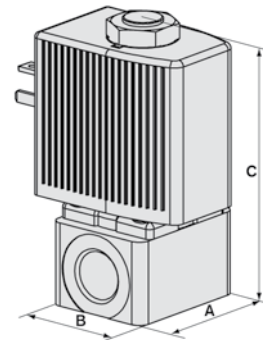
### Options

- Analysis version
- 2-way version

### Envelope Dimensions [mm] (see datasheet for details)



2507 cable plug Form B not include



Size	A	B	C
G 1/8"	25	20	50.5

## Ordering Charts

Port connection [inch]	Orifice [mm]	Kv Value [m³/h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			DC	AC	024/DC	024/50	230/50
<b>Brass</b>							
sub-base	1.2	0.045	0 - 12	0 - 21	163 521	–	163 524
G 1/8	1.6	0.06	0 - 6	0 - 12	163 499	163 500	163 502
sub-base					163 525	163 526	163 528
G 1/8	2	0.11	0 - 4.5	0 - 8	163 503	163 504	163 506
sub-base					163 529	163 530	163 532
G 1/8	2.4	0.13	0 - 3	0 - 6	161 193	163 507	161 194
sub-base					163 533	163 534	163 536
<b>Stainless steel</b>							
G 1/8	1.6	0.06	0 - 6	0 - 12	163 509	163 510	163 512
sub-base					163 537	–	–
G 1/8	2	0.11	0 - 4.5	0 - 8	163 513	163 514	163 516
sub-base					163 541	–	–
G 1/8	2.4	0.13	0 - 3	0 - 6	163 517	163 518	163 520

6011

## Accessories

Material	No. of valve connections	Item no.
<b>Manifolds</b>		
Aluminium anodised	1	005 312
	2	005 355
	3	005 313
	4	005 314
	5	005 315
	6	005 316
	7	005 893
	8	005 166
	9	005 241
	10	005 819
	11	005 242
	12	005 222

## Accessories for manifold

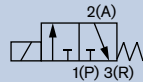
Description	Feature	Item no.
Blanking plug	with seal ring, G 1/8"	005 041
Covering plate	for unused valves	005 100

# Miniature Plunger Operated 3/2 Valve

6012

## G 1/8" or Flange

- Reliable double seated, plunger operation
- High quality FKM seal as standard
- Slip over coil can be rotated in 4 x 90 degrees



Direct-acting 3/2-way solenoid valve, normally closed (normally open on request). Threaded valve or Flange for neutral gases and liquids; also suitable for technical vacuum.

### Technical Data

<b>Temperature media</b>	-10 °C to +100 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	Single valve for block mounting on sub-base
	100% continuous rating Intermittent 60% (30 min)
<b>Body material</b>	Brass, polyamide (PA), stainless steel 1.4305
<b>Seal material</b>	FKM
<b>Coil material</b>	Epoxy (Class H)
<b>Power consumption</b>	DC: 4 W, AC: 9 VA (inrush), 6 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Cable plug Type 2507 Form B industry standard (not included)

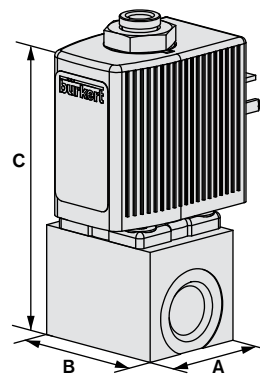
Orifice [mm]	Power consumption		Response times <sup>1)</sup>	
	Inrush	Hold	Opening [ms]	Closing [ms]
1.2	9 VA	6 VA (4 W)	7-10	9-12
1.6	4 W	4 W	7-12	7-12

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

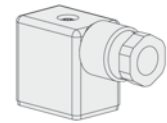
### Options

- Stainless steel body
- P-connection, normally open
- 3/2-way user defined flow direction
- 2 W version

### Envelope Dimensions [mm] (see datasheet for details)



Port is M5 fitting.



2507 cable plug  
Form B not included.

Size	A	B	C
G 1/8"	20	25	57.1

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
					024/DC	024/50	230/50
<b>Threaded version, brass body without manual override</b>							
C normally closed	G 1/8	1.2	0.045	0 - 10	161 904	163 577	163 579
		1.6	0.06	0 - 6	163 580	163 581	163 583
<b>Threaded version, brass body with manual override</b>							
C normally closed	G 1/8	1.2	0.045	0 - 10	163 584	163 585	163 587
		1.6	0.06	0 - 6	163 588	163 589	163 591

Circuit function	Port connection	Orifice [mm]	Kv Value water [m <sup>3</sup> /h]	Pressure range [bar] <sup>1)</sup>	Voltage/frequency [V/Hz]	Item no. Brass body without manual override	Item no. Stainless steel body without manual override	Item no. PA body with manual override
<b>Flange version</b>								
C normally closed	Flange	1.2	0.045	0 - 10	024/DC	163 600	-	161 063
					024/50	163 601	-	163 616
					230/50	163 603	-	163 618
		1.6	0.06	0 - 6	024/DC	163 604	163 612	163 619
					024/50	163 605	163 613	163 620
					230/50	217 634	163 615	163 622

<sup>1)</sup> Pressure values [bar]: Measured as overpressure to the atmospheric pressure

Material	No. of valve places	Item no.
<b>Manifolds</b>		
Aluminium, anodized	1	005 312
	2	005 355
	3	005 313
	4	005 314
	5	005 315
	6	005 316
	7	005 893
	8	005 166
	9	005 241
	10	005 819
	11	005 242
	12	005 222

## Accessories for manifold

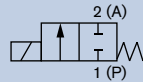
Description	Feature	Item no.
Blanking plug	with seal ring, G 1/8"	005 041
Covering plate	for unused valves	005 100

# Plunger Operated 2/2 Way Solenoid Valve

6013

## G 1/8" - G 1/4"

- Normally close
- With threaded body in brass or stainless steel
- Slip over coil can be rotated in 4 x 90 degrees
- FKM seal material with high quality standard



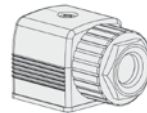
Direct-acting small solenoid valve which is plunger operated for neutral gases, liquids and technical vacuum. Special versions are also available for use with steam.

### Technical Data

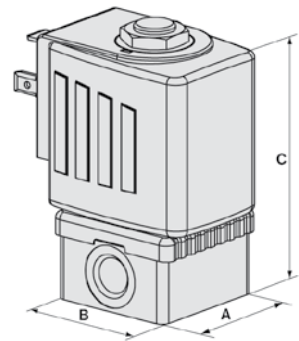
<b>Temperature media</b>	-10 °C to +100 °C
<b>Ambient temperature</b>	+55 °C, max.
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	Single valve 100% ED
<b>Body material</b>	Brass or Stainless steel 1.4305
<b>Seal material</b>	FKM
<b>Coil insulation class</b>	Polyamide Class B (epoxy class H on request)
<b>Power consumption</b>	AC: 24 VA (inrush), 17 VA (hold) DC: 8 W
<b>Protection class</b>	IP65, NEMA4 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803 Type 2508 Form A (not included)
<b>Response times<sup>1)</sup></b>	
Opening	20 ms
Closing	30 ms

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A not included (see page 32)



Size	A	B	C
G 1/8"	32.6	35	65.8
G 1/4"	49	35	71.8

### Options

- Normally open
- Impulse version
- Cable plug with LED and varistor
- PTFE/graphite seal to 180 °C
- ATEX version
- SIL certificate
- UL / UR / CSA / FM / CSA-EX Div 1/2,  
Gas Appliance Directive Class A, Group 2 approvals

## Ordering Chart

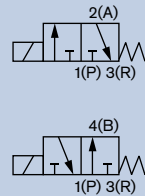
Port connection [inch]	Orifice [mm]	Kv Value [m <sup>3</sup> /h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			DC	AC	024/DC	024/50	230/50
<b>Brass</b>							
G 1/8	2	0.12	0 - 12	0 - 25	134 237	132 865	134 239
G 1/8	2.5	0.16	0 - 10	0 - 16	134 240	134 241	134 243
G 1/8	3	0.23	0 - 6	0 - 10	126 091	126 092	126 094
G 1/4	3	0.23	0 - 6	0 - 10	125 301	125 302	125 304
G 1/4	4	0.3	0 - 1.5	0 - 4	125 306	125 307	125 309
<b>Stainless steel</b>							
G 1/8	2	0.12	0 - 12	0 - 25	134 233	134 234	134 236
G 1/8	3	0.23	0 - 6	0 - 10	126 078	126 079	126 081
G 1/4	3	0.23	0 - 6	0 - 10	125 317	126 082	126 084
G 1/4	4	0.3	0 - 1.5	0 - 4	125 318	125 319	125 320

# Compact Plunger Operated 3/2 Valve

6014

## G 1/8" & G 1/4"

- Reliable double seated, plunger operation
- Threaded or flange version
- High quality FKM seal as standard
- Slip over coil can be rotated in 4 x 90 degrees



Direct-acting 3/2 way, normally closed or normally open solenoid valve. It is for neutral gases and liquids and it is also suitable for technical vacuum.

### Technical Data

<b>Temperature media</b>	-10 °C to +100 °C
<b>Ambient temperature</b>	-10 °C to +55 °C
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	+10%
<b>Duty cycle</b>	Single valve for block mounting on sub-base
	100% continuous rating Intermittent 60% (30 min)
<b>Body material</b>	Brass, Polyamide (Flange), (stainless steel optional)
<b>Seal material</b>	FKM (EPDM on request)
<b>Coil insulation class</b>	Polyamide class B (Epoxy class H on request)
<b>Coil material</b>	Polyamide (Class B)
<b>Protection class</b>	IP65, NEMA 4 (with cable plug)
<b>Electrical connection</b>	Cable plug acc. to DIN EN 175301-803 Type 2508 Form A (not included)

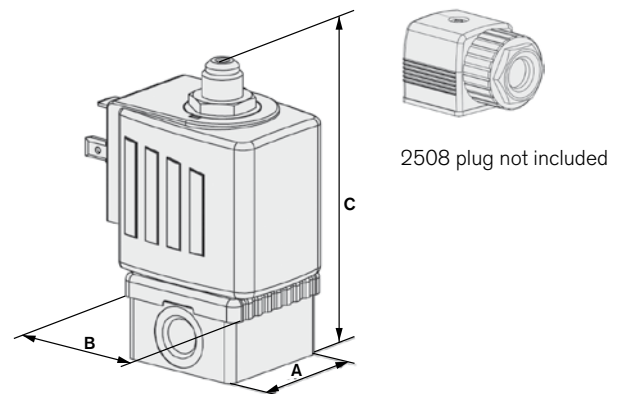
Orifice [mm]	Power consumption		Response times	
	Inrush AC	Hold AC	Opening [ms]	Closing [ms]
1.5	24 VA	17 VA (8 W)	10-15	15-20
2.0	24 VA	17 VA (8 W)	10-15	15-20
2.5	24 VA	17 VA (8 W)	15-20	10-22

Response times [ms]: Measured at valve outlet at 6 bar and +20 °C.  
Opening: Pressure build-up 0 to 90%,  
Closing: Pressure relief 100 to 10%

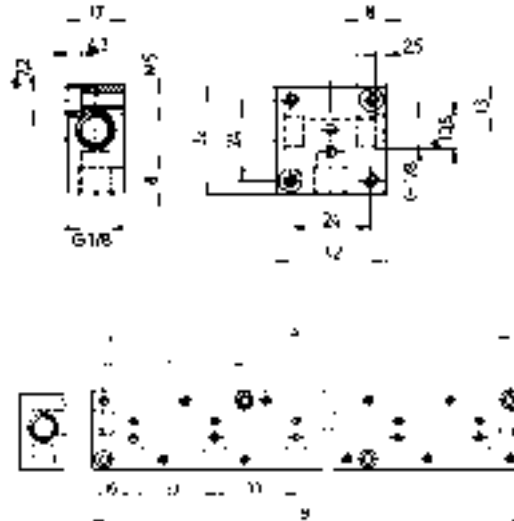
### Options

- Cable plug with LED and varistor
- Impulse version
- Oxygen version
- Vacuum version
- Analysis version
- Hazardous area approvals
- Explosion-proof version
- Further circuit functions
- SIL - certificated
- UL and CSA approvals

### Envelope Dimensions [mm] (see datasheet for details)



Size	A	B	C
G 1/8"	32	35	73.3
G 1/4"	46	35	78.3



## Ordering Chart

Circuit function	Port connection	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Pressure range [bar]	Power consumption [W]	Item no. voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
<b>Brass body</b>								
<b>Without manual override</b>								
C 3/2-way valve normally closed	sub-base	1.5	0.07	0 - 16	8	126 154	126 155	125 366
		2.0	0.11	0 - 10	8	125 367	125 368	125 370
	G 1/8"	2.0	0.11	0 - 10	8	125 333	125 334	125 336
		2.5	0.19	0 - 6	8	125 341	125 340	125 342
D 3/2-way valve normally open	sub-base	2.0	0.11	0 - 10	8	126 161	126 162	125 383
<b>With manual override</b>								
C 3/2-way valve normally closed	sub-base	1.5	0.07	0 - 10	5	126 403	126 404	126 406
		1.5	0.07	0 - 16	8	126 157	126 158	126 160
		2.0	0.11	0 - 6	5	126 407	126 408	126 410
		2.0	0.11	0 - 10	8	125 371	125 372	125 374
	G 1/8"	2.0	0.11	0 - 10	8	125 349	126 147	126 149

Circuit function	Port connection	Orifice [mm]	Kv value water [m <sup>3</sup> /h] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Power consumption [W]	Item no. voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
<b>Polyamide body material</b>								
<b>Without manual override</b>								
C 3/2-way valve normally closed	sub-base	1.5	0.07	0 - 10	5	126 390	126 391	126 393
<b>With manual override</b>								
C 3/2-way valve normally closed	sub-base	1.5	0.07	0 - 10	5	126 396	126 397	126 399

<sup>1)</sup> Measured at +20 °C, 1 bar<sup>2)</sup> pressure difference

<sup>2)</sup> Measured as overpressure to the atmospheric pressure

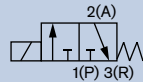
Features				Item no.
<b>Single manifold</b>				
From aluminium black anodized				005 020
<b>Multiple manifold</b>				
from aluminium	Hole spacing A [mm]	Total length B [mm]	Hole spacing C [mm]	
2 valves	57	65	-	005 023
3 valves	90	98	-	005 286
4 valves	123	131	-	005 287
5 valves	156	164	57	005 035
6 valves	189	197	57	005 038
8 valves	255	263	57	005 386
10 valves	321	329	90	005 764
Covering plate with plugs and O-ring, for closing off unused valve positions				005 630



## 3/2-way Solenoid Valve with Ex approval

6014 Ex

- 3-way direct-acting valve
- High cycling rate
- Type of protection: II 2G Ex m II T4 / II 2D
- Compact design
- Push-over coil



The 6014 Ex valve corresponds to the 6014 standard unit, but with an Ex coil and a moulded-on cable (available on request with a moulded-on terminal box).

The valve is available as a sub-base or as a threaded port model.

### Technical Data

<b>Orifice</b>	DN1.5 - 2.0 mm
<b>Body material</b>	Brass, stainless steel 1.4305
<b>Seal material</b>	FKM
<b>Media temperature</b>	-10 °C to +100 °C
<b>Ambient temperature</b>	
Single mounting	-10 °C to +55 °C
Manifold assembly	-10 °C to +40 °C
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100 % continuous rating
<b>Electrical connection</b>	3 m cable, moulded-in Terminal box on request
<b>Protection class</b>	IP65
<b>Type of protection</b>	II 2 G Ex m II T4 PTB00 ATEX 2129 X II 2 D IP65 T135°C

Response times <sup>1)</sup>	
Opening [ms]	Closing [ms]
10	15
to	to
15	20

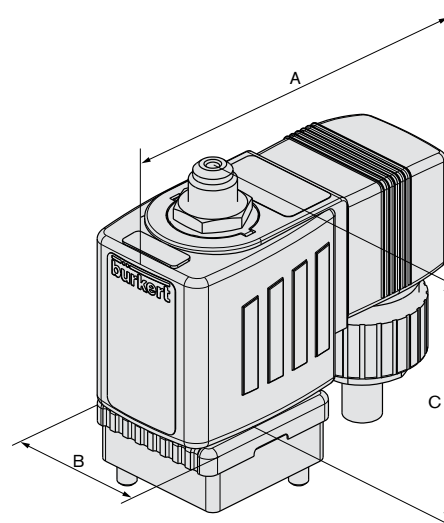
<sup>1)</sup> Measured at valve outlet 6 bar and +20 °C

Opening: pressure rise 0 to 90%, Closing: pressure drop 100 to 10%

### Options

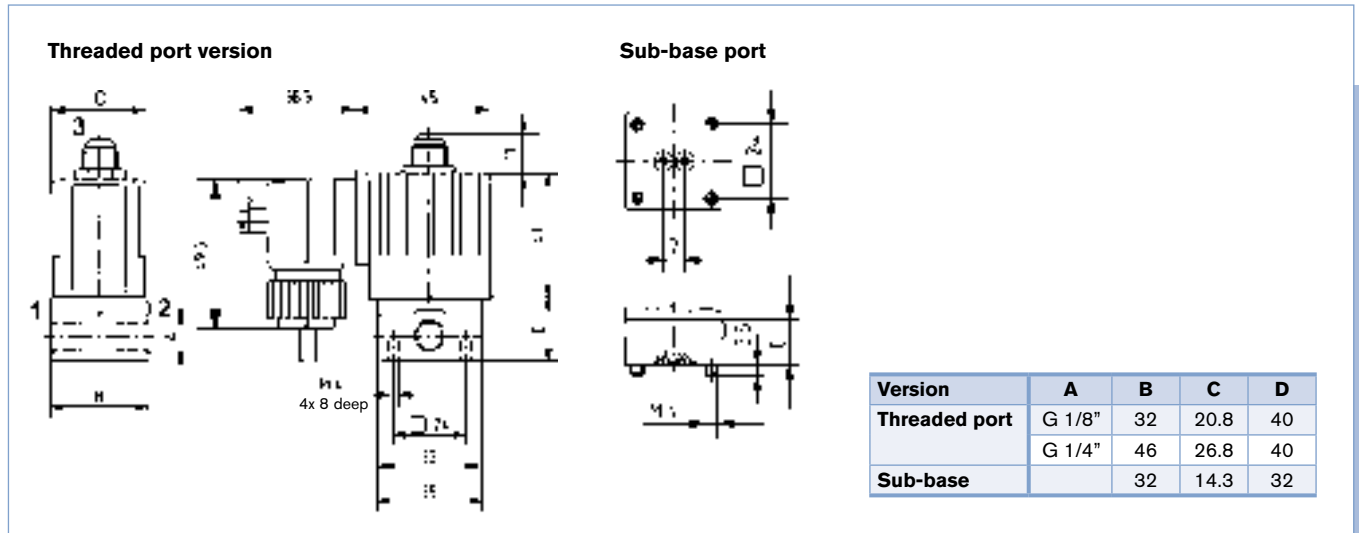
- SIL certificate

### Envelope Dimensions [mm]



Version		A	B	C
<b>Threaded port</b>	G 1/8"	83.5	32	20.8
	G 1/4"	83.5	46	26.8
<b>Flange</b>		83.5	32	14.3

## Envelope Dimensions [mm]



6014 Ex

## Ordering Chart

Circuit function	Port connection	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Body material	Nominal power consumption [W]	Voltage/frequency [V/Hz]	Item no. without manual override	Item no. with manual override
<b>Version according to EEx m II T4, valves with sub-base connection, cable outlet downwards, approved for manifold mounting</b>									
C 3/2-way, normally closed	Sub-base	1.5	0.07	0 - 10	Brass	7	024/UC	–	136 106
							230/UC	–	136 108
	Sub-base	2	0.11	0 - 6	Brass	7	024/UC	–	136 109
							230/UC	–	136 111
<b>Version acc. to EEx m II T4, valves with threaded ports, cable outlet downwards, for single mounting only</b>									
C 3/2-way, normally closed	G 1/8"	2	0.11	0 - 10	Brass	9	024/UC	278 637	278 645
							230/UC	136 078	136 090
					Stainless steel	9	024/UC	278 660	–
							230/UC	136 114	–
	G 1/4"	2	0.11	0 - 10	Brass	9	024/UC	278 639	278 647
							230/UC	136 081	136 093
					Stainless steel	9	024/UC	278 662	–
							230/UC	136 117	–

**Note** to Flange version: Manifolds see type 6014

## Accessories

Voltage [V]	Power consumption [W]	Nominal value of safety fuse [mA]	Item no.
Semi-delay fuses for Type 6014 Ex			
24	7	800	153 737
230	7	80	153 745
24	9	1000	153 738
230	9	100	153 718

## 3/2-way Ex i Solenoid Valve for pneumatic applications

6014 Ex i

- Direct-acting
- Intrinsically-safe operation
- Compact design
- Push-over coil system
- Threaded port and sub-base port in brass or stainless steel



The direct-acting, intrinsically safe 6014 Ex i valve consists of a metal body and a push-over coil with tag connectors on the side. Type 6014 Ex i can be used in a wide variety of ways, as a single valve, as a pilot valve or grouped together in blocks. The valve is also suitable for technical vacuum.

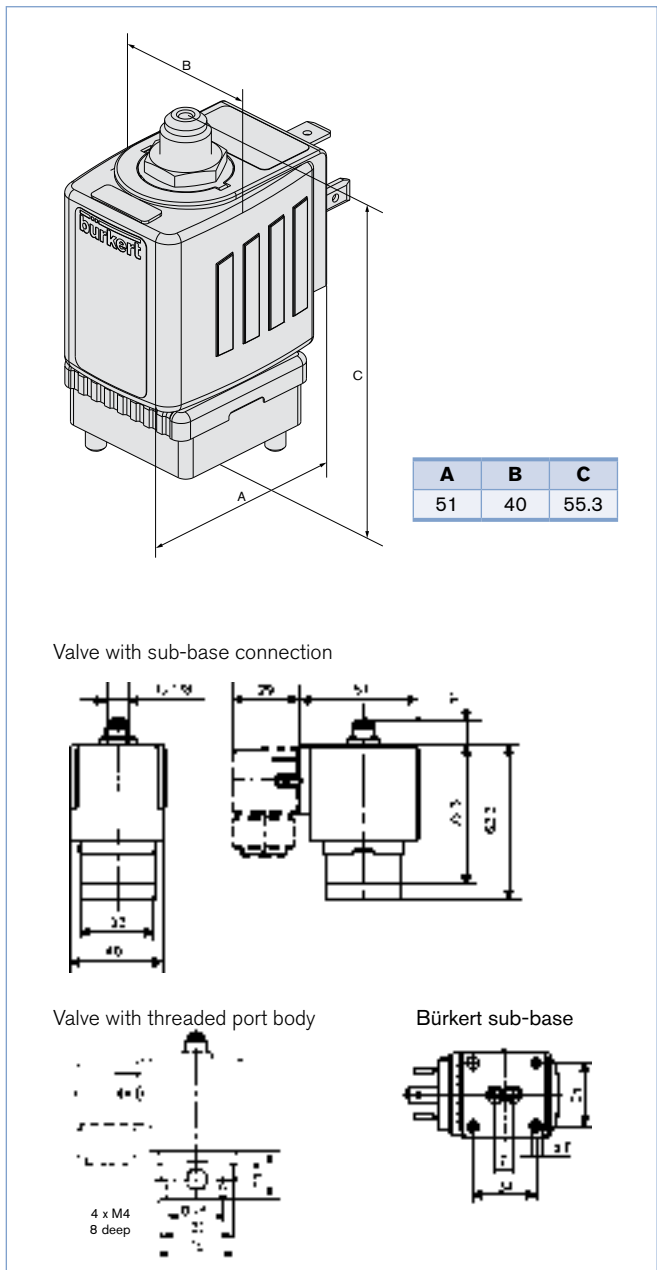
### Technical Data

<b>Orifice</b>	DN0.9 mm
<b>Port connection</b>	Sub-base/Threaded port
<b>Body material</b>	Stainless steel or brass
<b>Metal parts</b>	Stainless steel 1.4305
<b>Seal material</b>	FKM
<b>Media</b>	Lubricated and non-lubricated compressed air, instrument air, nitrogen
<b>Medium temperature</b>	-10 °C to +100 °C
<b>Ambient temperature</b>	-10 °C to +55 °C
<b>Electrical connection</b>	Tag connectors acc. to DIN EN 175301-803 (previously DIN 43650), Form A for connector Type 2508 (not included). Ensure correct polarity!
<b>Protection class</b>	IP65 with connector

Orifice [mm]	Response times <sup>1)</sup>	
	Opening [ms]	Closing [ms]
0.9	20	22

<sup>1)</sup> Measured at a valve outlet 6 bar and +20 °C  
 Opening: pressure rise 0 to 90%, Closing: pressure drop 100 to 10%

### Envelope Dimensions [mm] (see datasheet for details)

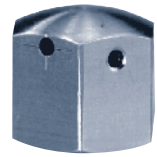


## Ordering Chart

Circuit function	Orifice [mm]	Qn-value air [l/min]	Seal material	Pressure range [bar]	Body material	Port connection	Item no. without manual override
C 3/2-way valve normally closed	0.9	30	FKM	Vacuum to 10	Stainless steel	Bürkert sub-base	144 540
						Threaded port G 1/8"	147 226
					Brass	Bürkert sub-base	147 227
						Threaded port G 1/8"	146 214

## Accessories

Description	Item no.
Stainless steel cap nut, for additional protection of the exhaust air channel from damp penetration	649 554
Cable plug Type 2508 acc. to DIN EN 175301-803 (previously DIN 43650) with blue compression gland nut	438 574

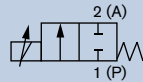


**Stainless steel cap nut**

## 2/2-way Proportional Valve for low differential pressures

6024

- Direct-acting, normally closed
- DN8 - 12 mm
- 1/2" or 3/4"



The direct-acting proportional valve, Type 6024, works as an electro-magnetically actuated control valve with relatively high flow rates at low operating pressures. The valve is normally closed.

### Technical Data

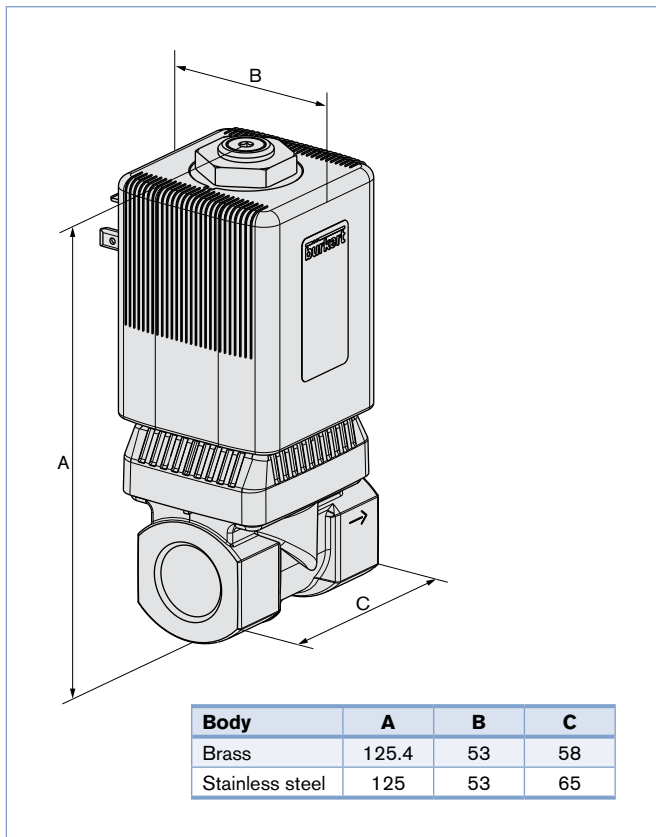
<b>Body material</b>	Brass, stainless steel
<b>Sealing material</b>	FKM, others on request
<b>Media technical vacuum</b>	Neutral gasses, liquids
<b>Medium temperature</b>	-10 to +90 °C
<b>Ambient temperature</b>	Max. +55 °C
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Operating voltage</b>	24 V DC
<b>Power consumption</b>	Max. 18 W
<b>Duty cycle</b>	100% continuously rated
<b>Port connection</b>	G 1/2", G 3/4" (NPT 1/2" and NPT 3/4" on request)
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A, (cable plug Type 2508 or Type 8605 pluggable control electronics not included)
<b>Mounting position</b>	Any, preferably with drive at top
<b>Typical control data<sup>3)</sup></b>	
Hysteresis	< 7 %
Repeatability	< 0.5 % of F.S.
Sensitivity	< 0.5 % of F.S.
Turn-down ratio	1:25
Kvs value <sup>2)</sup>	1.4 to 2.8 m <sup>3</sup> /h
Max. operating pressure <sup>1)</sup>	0.1 to 0.7 bar (depending on DN)
<b>Protection class - valve</b>	IP65 with plug-in module or cable plug on valve

<sup>1)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure

<sup>2)</sup> K<sub>v</sub> value [m<sup>3</sup>/h]: max. flow capacity for water

<sup>3)</sup> Characteristic data of control behaviour depends on process conditions

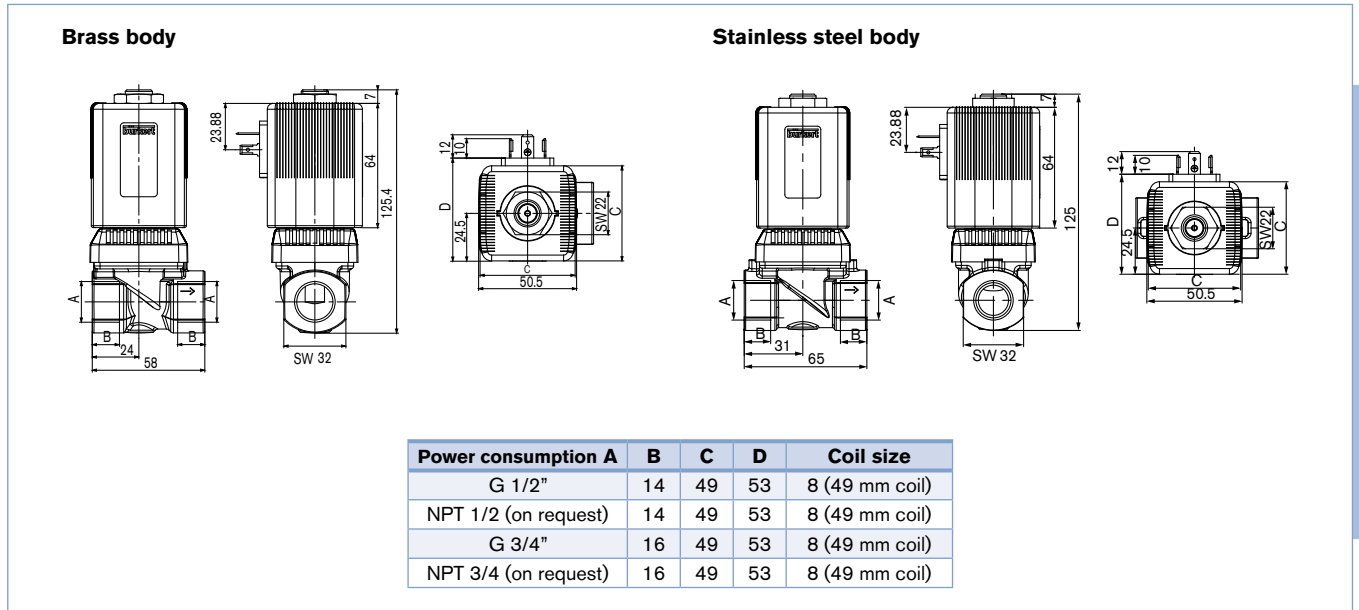
### Envelope Dimensions [mm]



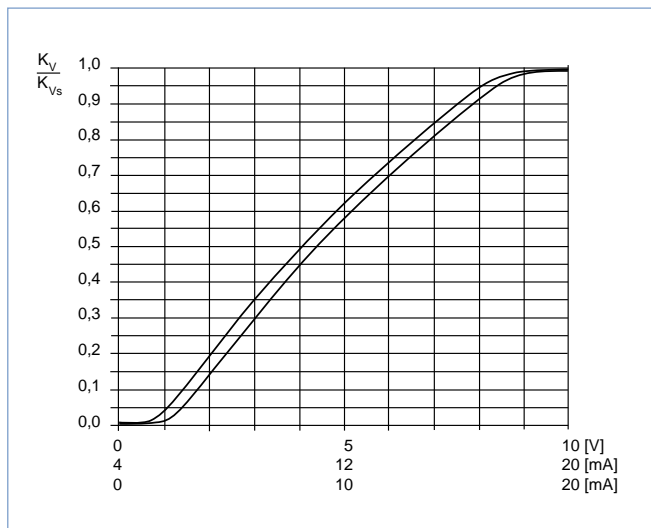
### Options

- Oxygen version

## Envelope Dimensions [mm]



## Characteristics of a proportional valve



## Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

**Recommended value:  $\Delta p_{\text{valve}} > 30\%$  of total pressure drop within the system**

Otherwise, the ideal, linear valve curve characteristic is changed. If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.

For that reason take advantage of Bürkert competent engineering services during the planning phase!

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv value water [m/h] <sup>1)</sup>	QNn value [l/min] <sup>2)</sup>	Max. operating pressure [bar] <sup>3)</sup>	Power consumption [W]	Max. Coil current [mA]	Item no. brass body	Item no. stainless steel body
<b>FKM Seal</b>									
A 2/2-way normally closed	G 1/2	8	1.4	1500	0.7	18	580	150 401	–
	G 3/4	8	1.4	1500	0.7	18	580	150 427	–
	G 1/2	10	2	2150	0.4	18	580	150 402	150 404
	G 3/4	10	2	2150	0.4	18	580	150 428	150 429
	G 1/2	12	2.8	3020	0.2	18	580	150 425	150 426
	G 3/4	12	2.8	3020	0.2	18	580	150 406	150 408

<sup>1)</sup> Kvs value: Flow rate value for water, measured at +20 °C and 1 bar pressure differential over a fully opened valve.

<sup>2)</sup> QNn value: Flow rate value for air with inlet pressure of 6 bar, 1 bar pressure differential and +20 °C.

<sup>3)</sup> Pressure values [bar]: Overpressure with respect to atmospheric pressure

## Accessories

	Voltage/frequency	Item no.
<b>Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A</b>		
Cable Plug	0 - 250 V AC/DC	008 376
Cable Plug with 3 m cable	0 - 250 V AC/DC	783 573

**Note:** The delivery of a cable plug includes the flat seal and fixing screw

**Electronic Control - see Type 8605.**

“How many measurement systems are needed to simply and safely analyse drinking water?”

**One.** Type 8905 packs up to six sensors in one compact casing. This saves space, time and money – during installation, operation and maintenance. The online analysis system can be modularly fitted with miniaturized analysis cubes – during operations with hot swap functionality. Each cube registers itself in the system and transmits reliable measurement data even with minimal sample water flow.

**Six parameters, one screen, one great overview. It doesn't get any better.**



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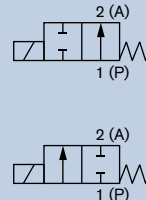


## 2/2-way Compact Solenoid Valve

6027

### G 1/4" - G 1/2"

- Direct-acting
- Brass and stainless steel body
- FKM seal material with high quality standard



Type 6027 is a direct-acting solenoid valve used for shut-off, dosing, filling, and ventilation. The push-over solenoid system is of modular design and the coil can be rotated 360°.

### Technical Data

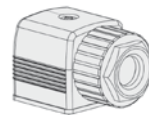
<b>Medium temperature</b>	
normally closed	-10 °C to +140 °C
normally open	-10 °C to +100 °C
<b>Ambient temperature</b>	-10 °C to +55 °C
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	Single valve 100% ED
<b>Body material</b>	Brass or stainless steel 1.4404 (316L)
<b>Coil material</b>	Epoxy (Class H)
<b>Seal material</b>	FKM, (PTFE/FKM and PTFE/graphite for high temperature versions, EPDM on request)
<b>Electrical connection</b>	According to DIN EN 175301-803 Form A for cable plug Type 2508 (not included)
<b>Protection class</b>	IP65 with Cable Plug

Power consumption					
Orifice [mm]	Inrush AC		Hold AC (hot coil)		DC (hot/cold coil) [W]
	[VA]	[VA]	[W]	[W]	
2.0-12.0	105	37	16		16 / 21

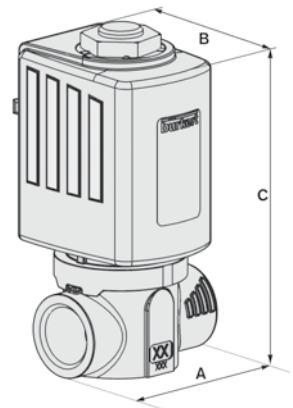
Response times				
Orifice [mm]	Response times AC		Response times DC	
	Opening [ms]	Closing [ms]	Opening [ms]	Closing [ms]
2.0-12.0	10-20	20-30	20-80	20-30

**Response times [ms]:** Measured at valve outlet at 6 bar and +20 °C.  
*Opening:* pressure build-up 0 to 90%  
*Closing:* Pressure relief 100 to 10%

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A  
not included



Size	A	B	C
G 1/4"	55	55.5	98.2
G 3/8"	55	55.5	101.2
G 1/2"	59	55.5	103.2

### Options

- ATEX approval
- Higher pressures for gaseous medium to 100 bar
- Oxygen versions
- High temperature version up to +180 °C

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			DC	AC	024/DC	024/50	230/50
<b>Normally closed (other versions on request)</b>							
<b>Brass body</b>							
G 1/4	3	0.28	0 - 30	0 - 25	178 295	178 296	178 297
	4	0.54	0 - 12	0 - 16	178 299	178 300	178 301
	5	0.73	0 - 6	0 - 10	178 303	178 304	178 305
G 3/8	6	0.95	0 - 3	0 - 6	178 323	178 324	178 325
	8	1.60	0 - 1	0 - 3	178 327	178 328	178 329
G 1/2	8	1.60	0 - 1	0 - 3	178 335	178 336	178 337
	10	1.80	0 - 0.4	0 - 2	178 339	178 340	178 341
<b>Stainless steel 1.4404 (316L)</b>							
G 1/4	3	0.28	0 - 30	0 - 25	178 239	178 240	178 241
	4	0.54	0 - 12	0 - 16	178 243	178 244	178 245
	5	0.73	0 - 6	0 - 10	178 247	178 248	178 249
G 3/8	6	0.95	0 - 3	0 - 6	178 267	178 268	178 269
	8	1.60	0 - 1	0 - 3	178 271	178 272	178 273
G 1/2	8	1.60	0 - 1	0 - 3	178 279	178 280	178 281
	10	1.80	0 - 0.4	0 - 2	178 283	178 284	178 285
	12	2.00	0 - 1.2	0 - 0.2	178 287	178 288	178 289
<b>Normally open (other versions on request)</b>							
<b>Brass body</b>							
G 1/4	3	0.28	0 - 16	0 - 16	211 914	228 487	228 488
	4	0.54	0 - 10	0 - 10	208 623	228 489	228 490
	5	0.73	0 - 8	0 - 8	228 491	228 492	228 493
G 3/8	5	0.73	0 - 8	0 - 8	228 494	228 495	228 496
	6	0.95	0 - 6	0 - 6	228 497	228 498	228 499
	8	1.60	0 - 3	0 - 3	228 500	228 501	228 502
G 1/2	8	1.60	0 - 3	0 - 3	211 916	228 503	228 504
	10	1.80	0 - 2	0 - 2	210 436	219 530	210 438

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m <sup>3</sup> /h]	Pressure range [bar]		Item no. voltage/frequency [V/Hz]		
			DC	AC	024/DC	024/50	230/50
<b>Stainless steel 1.4404 (316L)</b>							
G 1/4	3	0.28	0 - 16	0 - 16	230 243	230 244	230 245
	4	0.54	0 - 10	0 - 10	230 246	230 247	230 248
	5	0.73	0 - 8	0 - 8	230 249	230 250	230 251
G 3/8	5	0.73	0 - 8	0 - 8	230 252	230 253	230 254
	6	0.95	0 - 6	0 - 6	230 255	230 256	230 257
	8	1.60	0 - 3	0 - 3	230 258	230 259	230 260
G 1/2	8	1.60	0 - 3	0 - 3	230 261	230 262	230 263
	10	1.80	0 - 2	0 - 2	225 248	230 264	230 265
	12	2.00	0 - 1	0 - 1	210 441	230 266	210 321

6027

“Why must medical equipment drown out the breathing of patients?”

**It doesn't have to!** The WhisperValve by Bürkert can finally silence loud clicking noises. The tiny micro valve operates almost silently and with high precision. This makes it ideal for use in the immediate vicinity of the patient – for example in dialysis machines. This little powerhouse is absolutely reliable – and is a quiet achiever. This way doctor and patient can focus on therapy in peace.

**Quiet, lightweight and powerful.  
For medical technology, which is close to people.**



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## 2/2-way Solenoid Valve for liquids and gases

6213 EV

- Coupled spring diaphragm system opened
- Waterhammer free and low noise
- Flow-optimized housing and diaphragm geometry for high flow



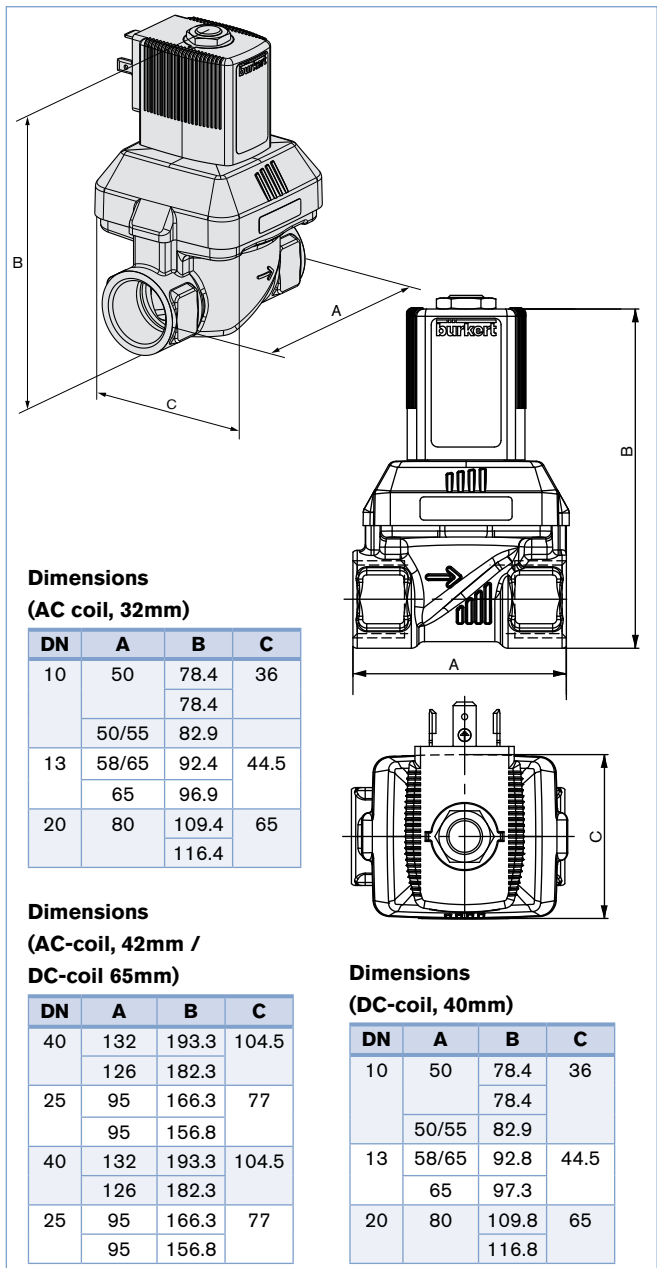
Type 6213 EV is a 2/2-way normally closed solenoid valve with a spring coupled diaphragm system. It is universally used for liquids. A minimum differential pressure of 0.5 bar is required for full opening.

### Technical Data

<b>Orifice</b>	Standard DN10-40 mm
<b>Body material</b>	Brass acc. to DIN EN 50930-6, stainless steel 1.4408 (316)
<b>Inner part of valve</b>	
Brass body	Brass, stainless steel and PPS
Stainless steel body	Stainless steel and PPS
<b>Seal material</b>	NBR, FKM, EPDM
<b>Medium</b>	
NBR	Neutral fluids, water, hydraulic oil, oil without additives
FKM	Per-solutions, hot oils with additives
EPDM	Oil and fat-free fluids and gases
<b>Ambient temperature</b>	Max. +55 °C
<b>Medium temperature</b>	
NBR	-10 °C to +80 °C
FKM	0 °C to +90 °C with polyamide coil 0 °C to +120 °C with epoxy coil
EPDM	-30 °C to +90 °C with polyamide coil -30 °C to +100 °C with epoxy coil
<b>Voltages</b>	Standard 024/DC, 024/50, 230/50
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (not included)
<b>Protection class</b>	IP65 with cable plug
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times<sup>1)</sup></b>	0.1-4 seconds (depending on orifice and differential pressure)

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
 Opening: pressure build-up 0 to 90%  
 Closing: Pressure drop 100 to 10%

### Envelope Dimensions [mm] (see datasheet for details)



Orifice DN	Power consumption <sup>1)</sup>			Insulation class coil <sup>2)</sup>	
	Inrush AC [VA]	Hold (hot coil)		Seal material FKM	Seal material NBR and EPDM
		AC [VA/W]	DC [W]		
10	34	14/8	10 (11)	H	B
10	34	14/8	10 (11)	H	B
13	36	14/8	10 (11)	H	B
13	36	14/8	10 (11)	H	B
20	38	14/8	10 (11)	H	B
20	38	14/8	10 (11)	H	B
25	150	37/16	28 (29)	H	H
25	150	37/16	28 (29)	H	H
40	190	37/16	28 (29)	H	H
40	190	37/16	28 (29)	H	H

<sup>1)</sup> Values in brackets applies at coil temperature 20 °C

<sup>2)</sup> H Epoxy coil, B Polyamide coil

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
					024/DC	024/50	230/50
<b>Brass body, FKM diaphragm, Epoxy coil, medium temperature 0 to +120 °C</b>							
A 2/2-way valve normally closed	G 1/4	10	1.9	0 - 10	221 678	221 679	221 681
	G 3/8	10	1.9	0 - 10	221 610	221 611	221 613
	G 1/2	10	1.9	0 - 10	221 614	221 615	221 616
	G 1/2	13	3.6	0 - 10	221 622	221 623	221 625
	G 3/4	13	3.6	0 - 10	221 626	221 627	221 629
	G 3/4	20	8.3	0 - 10	221 638	221 639	221 641
	G 1	20	8.3	0 - 10	221 642	221 643	221 645
	G 1	25	11.0	0 - 10	227 537	221 733	221 736
	G 1 1/4	25	11.0	0 - 10	227 538	221 737	221 740
	G 1 1/2	40	30	0 - 10	227 544	227 724	227 726
G 2	40	30	0 - 10	227 545	227 728	227 730	
<b>Brass body, EPDM diaphragm, Polyamide coil, medium temperature -30 to +90 °C</b>							
A 2/2-way valve normally closed	G 1/4	10	1.9	0 - 10	221 670	221 671	221 673
	G 3/8	10	1.9	0 - 10	221 646	221 647	221 649
	G 1/2	10	1.9	0 - 10	221 650	221 651	221 653
	G 1/2	13	3.6	0 - 10	221 654	221 655	221 657
	G 3/4	13	3.6	0 - 10	221 658	221 659	221 661
	G 3/4	20	8.3	0 - 10	221 662	221 663	221 665
	G 1	20	8.3	0 - 10	221 666	221 667	221 669
<b>Brass body, EPDM diaphragm, Epoxy coil, medium temperature -30 to +100 °C</b>							
A 2/2-way valve normally closed	G 1	25	11	0 - 10	227 535	221 717	221 720
	G 1 1/4	25	11	0 - 10	227 536	221 721	221 724
	G 1 1/2	40	30	0 - 10	227 542	221 741	221 745
	G 2	40	30	0 - 10	227 543	221 746	221 749

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
					024/DC	024/50	230/50
<b>Brass body, NBR Diaphragm, polyamide coil, medium temperature -10 to +80 °C</b>							
A 2/2-way valve normally closed	G 1/4	10	1.9	0 - 10	221 674	221 675	221 677
	G 3/8	10	1.9	0 - 10	221 598	221 599	221 601
	G 1/2	10	1.9	0 - 10	221 606	221 607	221 609
	G 1/2	13	3.6	0 - 10	221 602	221 603	221 605
	G 3/4	13	3.6	0 - 10	221 618	221 619	221 621
	G 3/4	20	8.3	0 - 10	221 630	221 631	221 633
	G 1	20	8.3	0 - 10	221 634	221 635	221 637
<b>Brass body, NBR Diaphragm, epoxy coil, medium temperature -10 to +80 °C</b>							
A 2/2-way valve normally closed	G 1	25	11	0 - 10	227 533	221 725	221 728
	G 1 1/4	25	11	0 - 10	227 534	221 729	221 732
	G 1 1/2	40	30	0 - 10	227 539	221 750	221 753
	G 2	40	30	0 - 10	227 541	221 754	221 757

## Ordering Chart

Circuit function	Port connection [inch]	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
					024/DC	024/50	230/50
<b>Stainless steel body, FKM diaphragm, epoxy coil, medium temperature 0 to +120 °C</b>							
A 2/2-way valve normally closed	G 3/8	10	1.9	0 - 10	221 758	221 759	221 761
	G 1/2	13	3.6	0 - 10	221 762	221 763	221 765
	G 3/4	20	8.3	0 - 10	222 122	222 123	222 125
	G 1	25	11	0 - 10	227 550	228 430	222 143
	G 1 1/4	25	11	0 - 10	227 551	228 433	222 145
	G 1 1/2	40	30	0 - 10	227 557	228 436	222 147
	G 2	40	30	0 - 10	227 558	228 439	222 149
<b>Stainless steel body, NBR diaphragm, Polyamide coil, medium temperature -10 to +80 °C</b>							
A 2/2-way valve normally closed	G 3/8	10	1.9	0 - 10	222 150	222 151	222 152
	G 1/2	13	3.6	0 - 10	222 156	222 157	222 158
	G 3/4	20	8.3	0 - 10	222 168	222 169	222 170
	G 1	20	8.3	0 - 10	222 171	222 172	222 173
<b>Stainless steel body, NBR diaphragm, Epoxy coil, medium temperature -10 to +80 °C</b>							
A 2/2-way valve normally closed	G 1	25	11	0 - 10	222 193	228 429	227 546
	G 1 1/4	25	11	0 - 10	222 197	228 432	227 547
	G 1 1/2	40	30	0 - 10	222 201	228 435	227 552
	G 2	40	30	0 - 10	222 205	228 438	227 554
<b>Stainless steel body, EPDM diaphragm, Polyamide coil, medium temperature -30 to +90 °C</b>							
A 2/2-way valve normally closed	G 3/8	10	1.9	0 - 10	222 153	222 154	222 155
	G 1/2	13	3.6	0 - 10	222 159	222 160	222 161
	G 3/4	20	8.3	0 - 10	222 174	222 175	222 176
	G 1	20	8.3	0 - 10	222 177	222 178	222 179
<b>Stainless steel body, EPDM diaphragm, Epoxy coil, medium temperature -30 to +100 °C</b>							
A 2/2-way valve normally closed	G 1	25	11	0 - 10	227 548	228 431	222 195
	G 1 1/4	25	11	0 - 10	227 549	228 434	222 199
	G 1 1/2	40	30	0 - 10	227 555	228 437	222 203
	G 2	40	30	0 - 10	227 556	228 440	222 207



## 2/2-way Solenoid Valve in three versions

6240

### G 1/4", G 3/8", G 1/2"

- High performance – small size
- High pressure version up to 40 bar
- High temperature version up to 180 °C
- Fast-acting
- ATEX version optional
- Without differential pressure switching

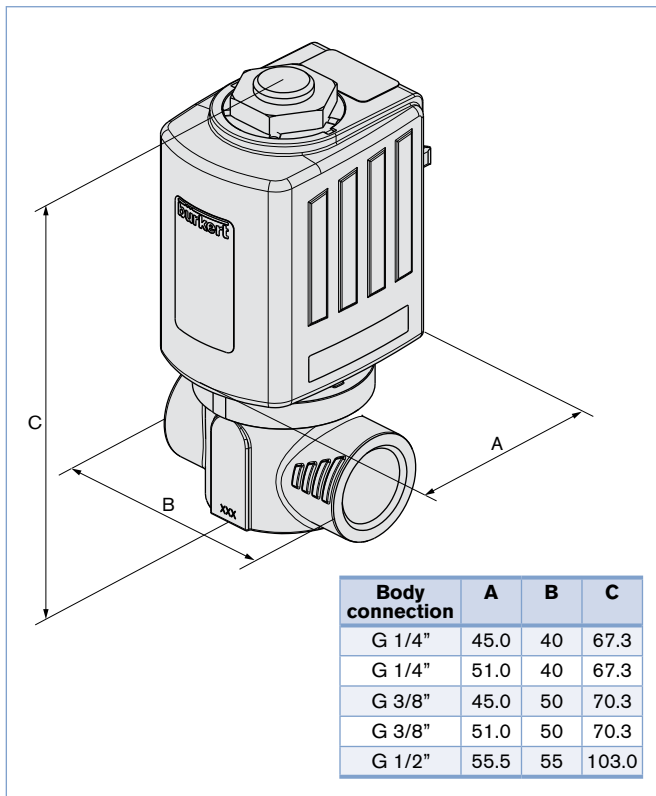


Type 6240 is a pilot-controlled solenoid valve with servo-piston and forced valve lifting. The valve opens without differential pressure from zero bar. The special construction makes it possible to use it with dry gaseous mediums with high pressure and steam up to 180 °C.

### Technical Data

<b>Port connections</b>	G 1/4", G 3/8", G 1/2"
<b>Orifice</b>	DN6.0 mm, DN12.0 mm
<b>Body material</b>	Brass, Stainless steel
<b>Coil material</b>	Epoxy
<b>Coil insulation class</b>	Class H
<b>Internal parts of valve</b>	Brass/Stainless steel, PEEK, PTFE carbon filled, FKM (EPDM on request) 1.4113, 1.4303
<b>Seal material</b>	FKM, PTFE/FKM and PTFE/PEEK for high temperature and high pressure versions (EPDM on request)
<b>Medium</b>	Neutral gases and liquids, such as e.g. compressed air, water, hydraulic oil Steam and hot medium
<b>High temperature version</b>	
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /sec
<b>Medium temperature</b>	
FKM	-10°C to +140 °C
PTFE/PEEK	DN6 -40 °C to +180 °C, DN12 -40 °C to +140 °C
EPDM	-30°C to +120 °C (on request)
<b>Ambient temperature</b>	max. 55 °C
<b>Operating voltage</b>	24V DC, 24V/50Hz, 230/50Hz (others on request)
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector acc. DIN EN 175 301-803 Form A for cable plug Type 2508 (not included)
<b>Protection class</b>	IP65 with cable plug
<b>Weight</b>	AC 8W, DC 10W (300g); AC 18W, DC 16W (800g)
<b>Installation</b>	As required, preferably with actuator upright

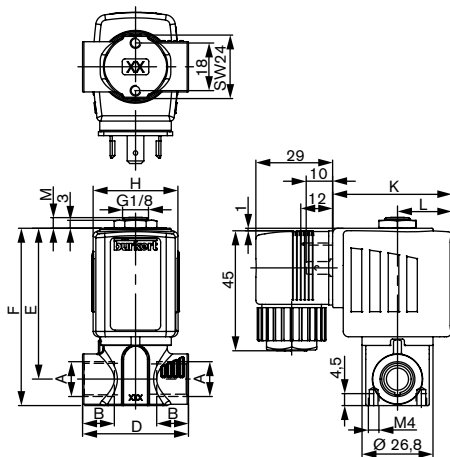
### Envelope Dimensions [mm] (see datasheet for details)



Orifice [mm]	Coil size [mm]	Inrush AC [VA]	Power consumption			Response times	
			Hold AC [VA/W]	[W]	DC (hot/cold coil) [W]	Opening [ms]	Closing [ms]
6	32	32	18	8	10/12	10-20	40-50
6	40	40	23	10	12/14	10-20	40-50
12	42	105	37	18	16/21	20-40	80-100

**Response times [ms]:** Measured at the outlet with 6 bar inlet pressure at +20 °C  
Opening: Pressure build-up 0 to 90% Closing: Pressure decrease 100 to 10%

Envelope Dimensions [mm] (see datasheet for details)



A Body connection	B [mm]	D [mm]	E [mm]	F [mm]	M [mm]	H [mm]	K [mm]	L [mm]
G 1/4"	12	40	57.3	67.3	3.7	32	45.0	20.5
G 1/4"	12	40	57.3	67.3	3.7	40	51.0	23.5
G 3/8"	12	50	58.3	70.3	3.7	32	45.0	20.5
G 3/8"	12	50	58.3	70.3	3.7	40	51.0	23.5
G 1/2"	12	55	89.0	103.0	7.5	42	55.5	27.0

Ordering Chart

Standard version, all valves with FKM seal, without cable plug								
Circuit function	Port connection [inch]	Orifice [mm]	Kv Value water [m³/h]	Pressure range [bar] <sup>1)</sup>	Coil size [mm]	Item no. per voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
A 2/2-way valve normally closed	<b>Medium temperature -10 to +120°C, FKM seal</b>							
	<b>Brass body</b>							
	G 1/4	6	0.6	0 - 16	32	177 800	177 801	177 802
	G 3/8	6	0.6	0 - 16	32	177 803	177 804	177 805
	<b>Stainless steel body</b>							
	G 1/4	6	0.6	0 - 16	32	177 806	177 807	177 808
	G 1/2	12	2.2	0 - 16	42	238 632	238 633	238 634

High temperature version, all valves with PTFE/PEEK seal, without cable plug								
Circuit function	Port connection [inch]	Orifice [mm]	Kv Value water [m³/h]	Pressure range [bar] <sup>1)</sup>	Coil size [mm]	Item no. per voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
A 2/2-way valve normally closed	<b>Medium temperature -40° to +180°C, PTFE/Graphite seal</b>							
	<b>Stainless steel body</b>							
	G 1/4	6	0.6	0 - 16	32	184 739	184 740	184 741
	G 1/2	12	2.2	0 - 16	42	238 638	238 639	238 640

High pressure version, all valves with PTFE/FKM seal, without cable plug									
Circuit function	Port connection [inch]	Orifice [mm]	Kv Value water [m³/h]	Pressure range [bar] <sup>1)</sup>		Coil size [mm]	Item no. per voltage/frequency [V/Hz]		
				liquid medium	gaseous medium		024/DC	024/50	230/50
A 2/2-way valve normally closed	<b>Medium temperature -10° to +120°C, PTFE/FKM seal</b>								
	<b>Brass body</b>								
	G 1/4	6	0.6	0 - 25	0 - 40	40	184 742	184 743	184 744
	G 3/8	6	0.6	0 - 25	0 - 40	40	184 745	184 746	184 747

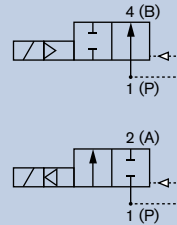
<sup>1)</sup> Overpressure to the atmospheric pressure

## 2/2-way Solenoid Valve with Servo Diaphragm

6281 EV

### G 1/2" - G 2"

- Waterhammer absorbing and low noise
- Rugged moulded diaphragm
- Short installation length



Servo-assisted solenoid valve with servo-diaphragm for the control of liquid or gaseous Medium. A pressure difference of 0.5 bar is required for a complete switchover.

### Technical Data

<b>Pressure range</b>	0.2-16 bar max.
<b>Temperature media</b>	
NBR	-10 °C to +80 °C
FKM	0 °C to +120 °C (with polyamide coil +90 °C)
<b>Ambient temperature</b>	+55 °C, max.
<b>Voltage tolerance</b>	± 10 %
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	Brass acc. to DIN EN 50930-6 Stainless steel
<b>Seal material</b>	NBR, FKM, (EPDM on request)
<b>Coil material</b>	Polyamide or Epoxy (Class H)
<b>Power consumption</b>	DC: 8 W, AC: 24 VA (inrush), Circuit function A - 14/8 VA (hold) Circuit function B - 16/7 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (supplied as standard)
<b>Response times<sup>2)</sup></b>	0.1-4 seconds (depending on orifice and differential pressure)

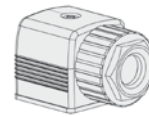
<sup>2)</sup> Measured at valve outlet at 6 bar and +20 °C.

Opening: pressure build-up 0 to 90%, Closing: Pressure relief 100 to 10%

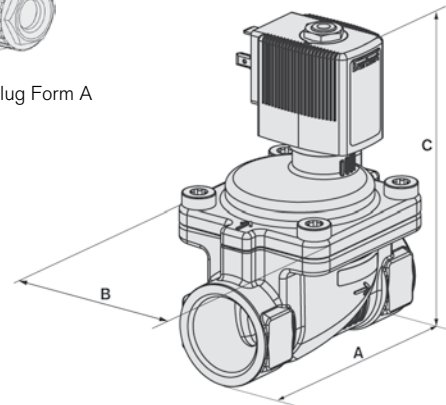
### Options

- EPDM version up to +100 °C with epoxy coil
- European gas approval, EPDM with KW W270
- Brass dezincification
- Ex-version available

### Envelope Dimensions [mm] (see datasheet for details)



2508 cable plug Form A  
not included



DN	Size	A	B	C
13	G 1/2"	65	42	100.7
20	G 3/4"	80	60	111.7
20	G 1"	80	60	118.7
25	G 1"	95	70	123.2
25	G 1 1/4"	95	70	132.7
40	G 1 1/2"	126	99	151.7
40	G 2"	132	99	162.7

## Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
				024/DC	024/50-60	230/50-60
<b>Normally closed (other versions on request)</b>						
<b>Brass body, Seal material NBR, Polyamide coil, Medium temperature -10 to +80 °C</b>						
G 1/2	13	3.8	0.2 - 16	221 844	221 845	221 846
G 3/4	20	8.5	0.2 - 16	221 850	221 851	221 852
G 1	25	12	0.2 - 16	221 856	221 857	221 858
G 1 1/4	25	12	0.2 - 16	221 859	221 860	221 861
G 1 1/2	40	30	0.2 - 16	221 862	221 863	221 864
G 2	40	30	0.2 - 16	221 865	221 866	221 867
<b>Stainless steel body, Seal material FKM, Epoxy coil, Medium temperature 0 to +120 °C</b>						
G 1/2	13	3.8	0.2 - 16	221 989	221 990	221 991
G 3/4	20	8.5	0.2 - 16	221 992	221 993	221 994
G 1	20	8.5	0.2 - 16	221 995	221 996	221 997
G 1	25	12	0.2 - 16	221 998	221 999	222 000
G 1 1/4	25	12	0.2 - 16	222 001	222 002	222 003
G 1 1/2	40	30	0.2 - 16	222 004	222 005	222 006
G 2	40	30	0.2 - 16	222 007	222 008	222 009

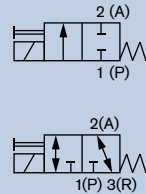
Port connection [inch]	Orifice [mm]	Kv value water [m³/h]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
				024/DC	024/50	230/50
<b>Normally open (other versions on request)</b>						
<b>Brass body, Seal material NBR, Epoxy coil, Medium temperature -10 to +80 °C</b>						
G 1/2	13	3.8	0.2 - 16	221 926	221 928	221 929
G 3/4	20	8.5	0.2 - 16	221 934	221 935	221 936
G 1	25	12	0.2 - 16	221 940	221 941	221 942
G 1 1/4	25	12	0.2 - 16	221 943	221 944	221 945
G 1 1/2	40	30	0.2 - 16	221 946	221 947	221 948
G 2	40	30	0.2 - 16	221 949	221 950	221 951
<b>Stainless steel body, Seal material FKM, Epoxy coil, Medium temperature 0 to +120 °C</b>						
G 1/2	13	3.8	0.2 - 16	228 387	228 388	228 389
G 3/4	20	8.5	0.2 - 16	228 390	228 391	228 392
G 1	25	12	0.2 - 16	228 393	228 394	228 395
G 1 1/4	25	12	0.2 - 16	228 396	228 397	228 398
G 1 1/2	40	30	0.2 - 16	228 399	228 400	228 401
G 2	40	30	0.2 - 16	228 402	228 403	228 404

## 2/2 and 3/2-way Flipper Solenoid Valve, with hermetic isolation of fluid

6604

### DN0.6 mm

- Low internal volume
- High chemical resistance
- Low power consumption
- Impulse version
- High back pressure tightness



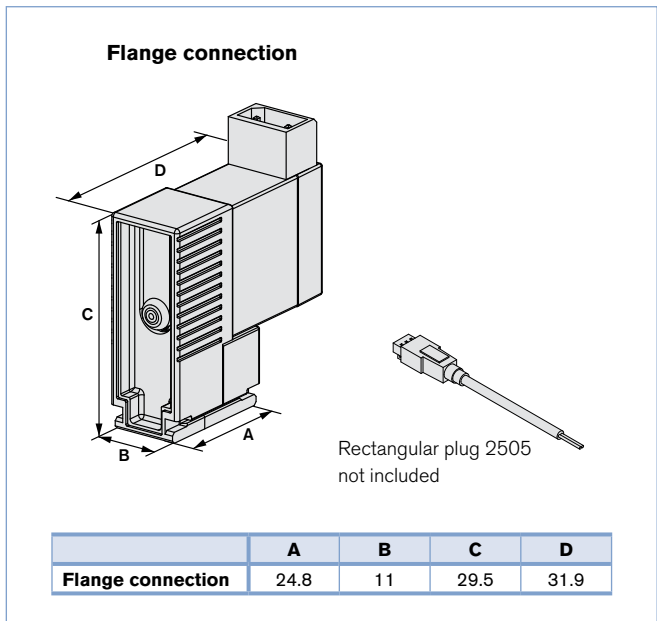
Thanks to the patented Bürkert flipper technology, the direct-acting 6604 solenoid valve is unique. It combines fast, precise switching behaviour with reliable media separation, and the design eliminates heat transfer between fluid and coil. The use of high quality materials makes it possible to also use it where high chemical resistance is required. The optional impulse model works with the smallest energy requirement, and is therefore especially suitable for battery operation; the heat transfer to the medium is negligible for this model. A minimal dead volume and gap-free internal design make it possible to use it in medical, analytical and laboratory technology.

### Technical Data

<b>Orifice</b>	DN0.6 mm
<b>Body material</b>	PEEK
<b>Seal material</b>	FFKM (Perfluorelastomer)
<b>Medium</b>	Resistant to neutral and aggressive liquids and gases, see Bürkert chemical resistance chart; technical vacuum
<b>Medium temperature</b>	0 °C to +50 °C
<b>Ambient temperature</b>	Max. +55 °C
<b>Viscosity</b>	Max. 21 mm <sup>2</sup> /s
<b>Internal volume</b>	
Fluid chamber	ca. 15µl
3/2-way versions	ca. 45µl
2/2-way versions	ca. 35µl
<b>Port connection</b>	Flange
<b>Manual override</b>	Push-button
<b>Operating voltage</b>	6, 12, 24 V/DC *
<b>Voltage tolerance</b>	±10%
<b>Power consumption</b>	1.5 W
<b>Duty cycle</b>	100% continuous rating
<b>with manifold mounting</b>	40% intermittent rating (within 10 min)
(in case Medium or ambient temperature higher +40 °C)	
<b>Cycling function</b>	Monostable or bistable (option)
<b>Electrical connections</b>	Rectangular plug or 2 single flying leads, 300 mm
<b>Protection class</b>	IP40 with rectangular plug
<b>Mounting (sub-base valve)</b>	with holders and mounting screw
<b>Installation</b>	As required, preferably with flange downwards

\* 10% residual ripple allowed

### Envelope Dimensions [mm] (see datasheet for details)



### Options

- Further port connections

## Ordering Chart

Circuit function	Orifice [mm]	Kv value water [m³/h]	Kv value II water [l/min]	QnN-value air [l/min]	Pressure range [bar]	Electrical connection	Item no. per Voltage/frequency [V/Hz] Cycling function			
							monostable		bistable (impulse)	
							012/DC*	024/DC*	06/DC*	012/DC*
<b>Valves with flange</b>										
A 2/2-way valve, normally closed	0.6	0.006	0.1	6.4	Vac. - 3	Rectangular plug 5.08 mm	145 467	140 464	140 467	143 170
						Flying leads 300 mm	140 465	140 466	140 468	145 467
T 3/2-way valve, universal function	0.6	0.006	0.1	6.4	Vac. - 3	Rectangular plug. 5.08 mm	140 469	140 470	140 473	141 388
						Flying leads 300 mm	140 471	140 472	140 474	145 470

6604

## Accessories

Description	Feature	Item no.
Rectangular cable plug	with 3 m cable	133 486
	with 300 mm flying lead	644 068
	with 2 single contacts	644 067

Quantity of valves places	Dimensions A [mm]	Item no.
<b>Manifolds for Type 6604</b>		
Single manifold in stainless steel	10	644 684
2 valves	33	659 285
3 valves	44	659 286
4 valves	55	659 287
5 valves	66	653 131
6 valves	77	659 288
7 valves	88	659 289
8 valves	99	659 290
9 valves	110	659 291
10 valves	121	651 379

## Manifold dimensions [mm]

**Single manifold M3, stainless steel**

**Multi-station manifold, PEEK**

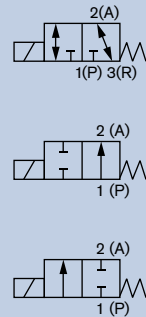
No. of valve positions	2	3	4	5	6	7	8	9	10
Dimensions A [mm]	33	44	55	66	77	88	99	110	121

## 2/2 and 3/2-way Rocker Solenoid Valve for analytical applications

6606

### DN1.5 mm or DN1.6 mm

- With isolating diaphragm
- For aggressive media
- Zero dead volume
- Also suitable for vacuum
- 16 mm width
- High back pressure tightness

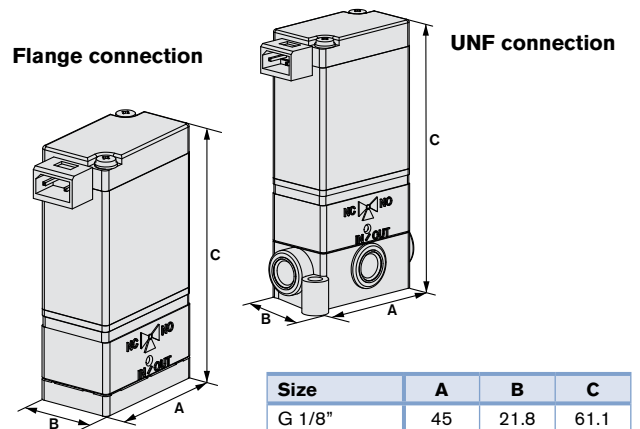


The direct-acting rocker solenoid valve, Type 6606 (2/2- and 3/2-way), has minimal dead volume and low-gap, plus an easy to wash inside contour. The medium is exposed only to the housing material and the seal. The heat transfer into the medium is minimal, since the housing is also separated from the coil by a stainless steel plate. The valve is particularly suitable for dosing, filling, mixing and dispensing small quantities of corrosive medium optimal.

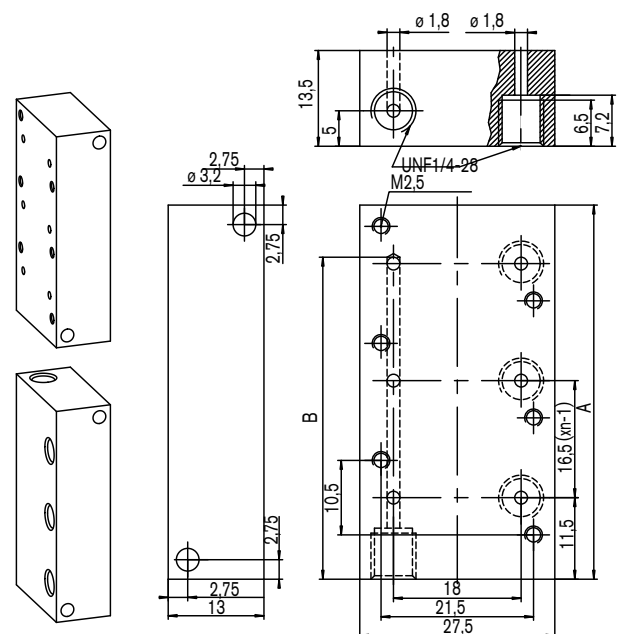
### Technical Data

<b>Pressure range</b>	Vac – 2 bar
<b>Medium temperature</b>	0 °C to +50 °C
<b>Ambient temperature</b>	Max. +55 °C
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Body material</b>	PEEK, PVDF, ETFE
<b>Seal material</b>	FFKM
<b>Power consumption</b>	3.4 W
<b>Protection class</b>	IP65 with flying leads or with cable plug IP40 with rectangular plug
<b>Electrical connection</b>	- Rectangular plug, Type 2505 - Tag connection acc. to DIN EN 175301-803 (previously DIN 43650) for cable plug, Form C - 2 FEP flying leads, AWG24, 500 mm long - Circular connector and spade connection at side on request
<b>Response times</b>	acc. to ISO 12238:2001; measured at valve outlet at 2 bar and +20 °C Opening ca. 25 ms (pressure rise from 0 to 10%) Closing ca. 25 ms (pressure drop 100 to 90%)
<b>Internal volume</b>	depending on body at G/NPT 1/8 85 µl with Flange 68 µl at UNF body 30 µl (2/2), 55 µl (3/2) on request < 10 µl

### Envelope Dimensions [mm] (see datasheet for details)

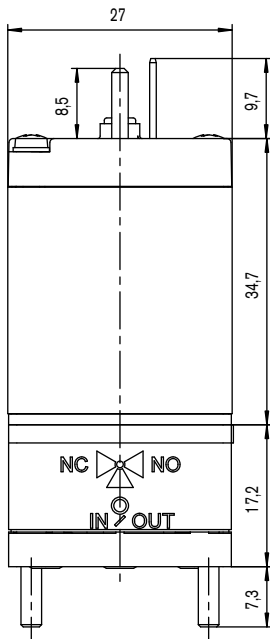


Size	A	B	C
G 1/8"	45	21.8	61.1
UNF 1/4-28	37.8	23.8	60.1
Tube	39	16	54.8
Flange	27	16	51.9

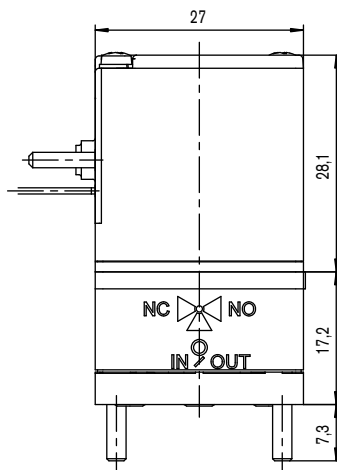


Envelope Dimensions [mm] (see datasheet for details)

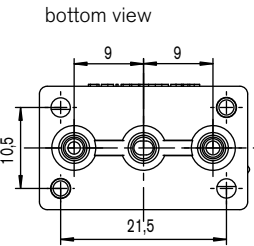
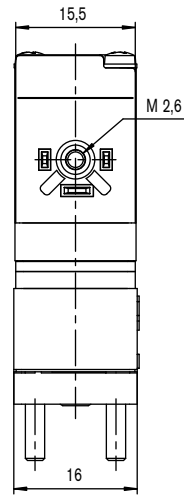
Bürkert Manifold connection



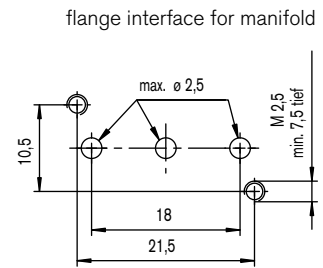
Spade connection on top



Spade connection on side



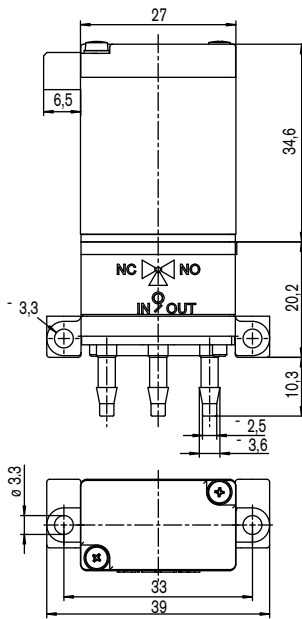
bottom view



flange interface for manifold

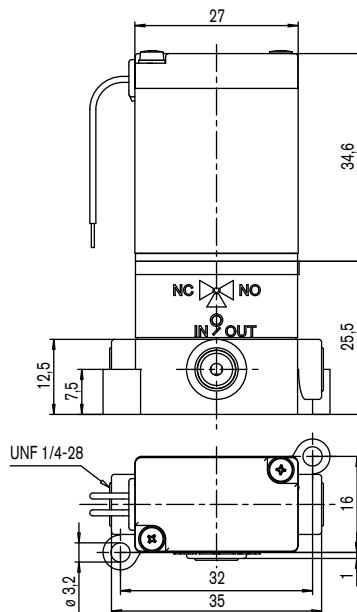
The middle port does not apply for the 2/2-way function

Valve with barb tube fittings and rectangular plug



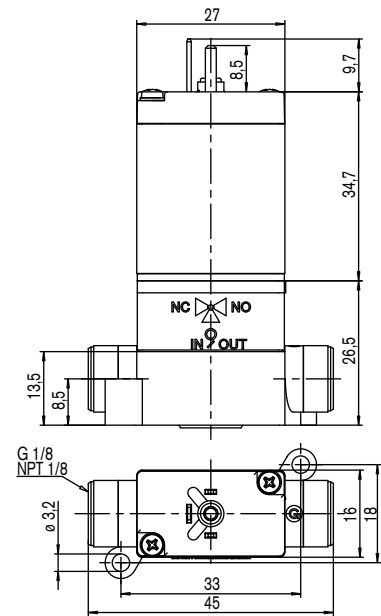
For the 2/2-way version the NO port does not apply

Valve with UNF 1/4-28 and flying lead



For the 2/2-way version the NO port does not apply

Valve with G 1/8 or NPT 1/8 and spade connection on top



For the 2/2-way version the middle port does not apply



## Ordering Chart

6606

Circuit function	Port connection	Orifice [mm]	Kv value water [m <sup>3</sup> /h] <sup>1)</sup>	Kv value water [l/min]	Qn-value air [l/min]	Pressure range [bar] <sup>2)</sup>	Body material	Electrical connection	Voltage/frequency [V/Hz]	Item no.
A 2/2-way valve normally closed	UNF 1/4-28	1.5	0.039	0.66	42	Vac. - 2	ETFE	Flying leads, 500 mm	024/DC	137 759
	G 1/8"	1.6	0.060	1.02	65	Vac. - 2	PVDF	Rectangular plug	024/DC	139 146
								Tag connector sideways	024/DC	137 746
	Tube spigot	1.6	0.039	0.66	42	Vac. - 2	PVDF	Flying leads, 500 mm	024/DC	137 764
								Rectangular plug	024/DC	139 147
	Bürkert Flange connection	1.6	0.039	0.66	42	Vac. - 2	PEEK	Flying leads, 500 mm	012/DC	137 744
									024/DC	137 745
Tag connector sideways								024/DC	137 741	
B 2/2-way valve normally open	G 1/8"	1.6	0.060	1.02	65	Vac. - 2	PVDF	Tag connector sideways	024/DC	137 747
T 3/2-way valve universal function	UNF 1/4-28	1.5	0.025	0.43	27	Vac. - 2	ETFE	Flying leads, 500 mm	024/DC	137 779
								G 1/8"	1.6	0.047
	Rectangular plug	024/DC	139 149							
	Tag connector sideways	024/DC	137 769							
	Tube spigot	1.6	0.025	0.43	27	Vac. - 2	PVDF	Flying leads, 500 mm	012/DC	137 782
									024/DC	137 783
								Rectangular plug	024/DC	139 150
								Tag connector sideways	012/DC	137 781
	Bürkert Flange connection	1.6	0.032	0.54	35	Vac. - 2	PEEK	Flying leads, 500 mm	024/DC	137 768
Rectangular plug								024/DC	139 148	
Tag connector sideways								012/DC	137 766	
								024/DC	137 765	

<sup>1)</sup> Measured at +20 °C, 2 bar pressure at valve inlet and 1 bar at outlet

<sup>2)</sup> Gauge pressure with respect to the prevailing atmosphere pressure

Number of valve stations	Dimensions A [mm]	Item no.
<b>Manifolds</b>		
2	37.50	651 506
3	53.75	651 510
4	70.25	651 507
5	86.75	651 508
6	103.30	651 509
7	119.80	651 521
8	163.30	651 522

Standard distributor/collector: a common In/Output, individual Out/Input (all UNF1/4-28) supplied without valves; PEEK material

“Who says that producing pharmaceutical glass cannot be more efficient?”

**Efficiency is critical to success** – both in energy and resource consumption as well as in production processes. Bürkert has now opened up new possibilities with the MFCs of our Type 874x family for up-to-date mass flow control of gases. Easy to use and with a state of the art communication concept: A well-coordinated, flexible system that redefines precision, achieves the highest repeatability and manages up to 16 devices through a single Ethernet interface. This results in more transparent processes and utilizes resources efficiently.

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**Slim, precise, future-proof –  
mass flow controllers that meet the needs of tomorrow.**



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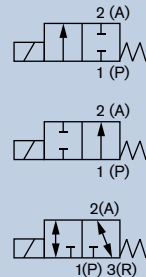
**bürkert**  
FLUID CONTROL SYSTEMS

## 2/2- and 3/2-way Solenoid Valve for analytical applications

6624

### TwinPower

- 10 mm Installation width
- Orifice DN0.8-1.6 mm
- Media separated, for aggressive fluids
- Direct-acting
- Suitable vacuum



Our revolutionary Twin-power technology uses two coils. The innovative drive concept is combined with the proven rocker principle. The integrated power reduction decreases the energy consumption by 75% and has the same features as a traditional 16 mm unit. In combination with other design features the heat transfer into the medium can be reduced to a minimum.

In the design of the 6624, the main benefits lie in its excellent cleanability and a high reliability. By using high performance materials the 6624 suits the handling of aggressive medium perfectly. The valve is available in a 2/2-way and 3/2-way version.

### Technical data

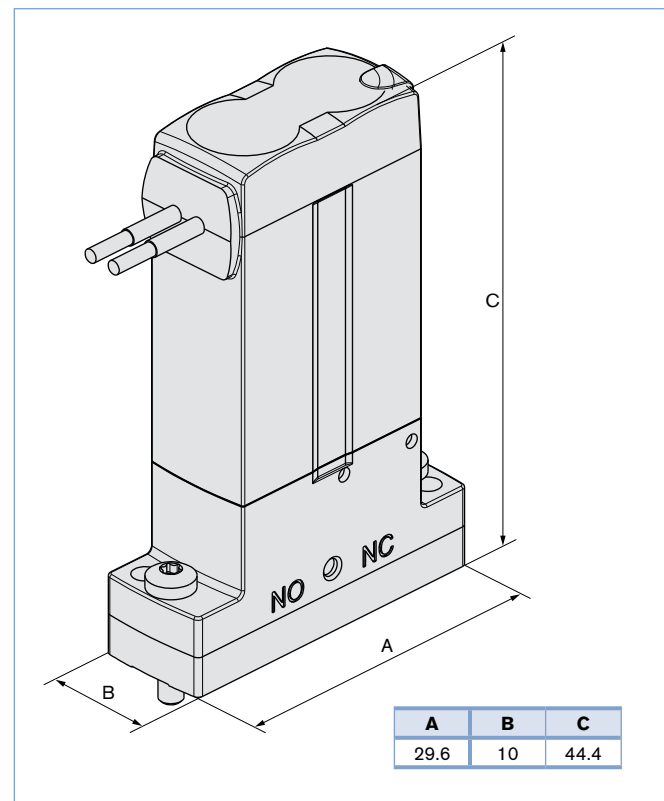
<b>Orifice</b>	DN0.8 mm (Vac-5 bar), DN1.6 mm (Vac-2 bar)
<b>Body material</b>	PEEK / PPS
<b>Seal material</b>	FFKM / FKM / EPDM
<b>Medium</b>	Resistant to neutral and aggressive fluids and gases; see Bürkert resistance table
<b>Medium temperature</b>	
FFKM	+15 °C to +50 °C
FKM	-5 °C to +50 °C
EPDM	-5 °C to +50 °C
<b>Ambient temperature</b>	
FFKM	+15 °C to +55 °C
FKM	-10 °C to +55 °C
EPDM	-10 °C to +55 °C
<b>Internal volume</b>	< 100 µl
<b>Port connection</b>	Flange / UNF / tube spigot
<b>Electrical connection</b>	Flying leads, Rectangular plug Type 2505 (not included)
<b>Operating voltages</b>	24V <sup>1)</sup>
<b>Voltage tolerance</b>	
24V	±10% <sup>2)</sup>
12V	+10% / -5% <sup>2)</sup>
<b>Nominal power</b>	4 W inrush power 1 W nominal holding current (internal reducing of power)
<b>Duty cycle</b>	Continuous operation 100% ED
<b>Installation</b>	As required
<b>Protection class</b>	IP40
<b>Switching frequency</b>	Max. 5 Hz <sup>3)</sup>
<b>Response times</b>	Acc. to ISO 12238
Opening	approx. 10 ms (Pressure rise 0-10%)
Closing	approx. 13 ms (Pressure drop 100-90%)

<sup>1)</sup> Battery voltage, check polarity (red= +, black= -)

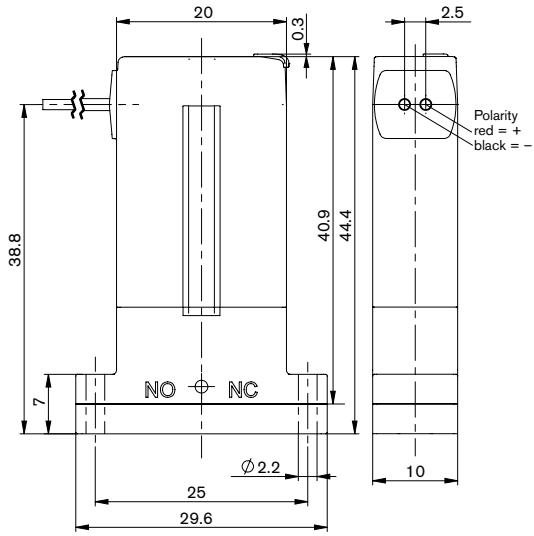
<sup>2)</sup> Max. allowed ripple

<sup>3)</sup> at ambient temperature of 20 °C

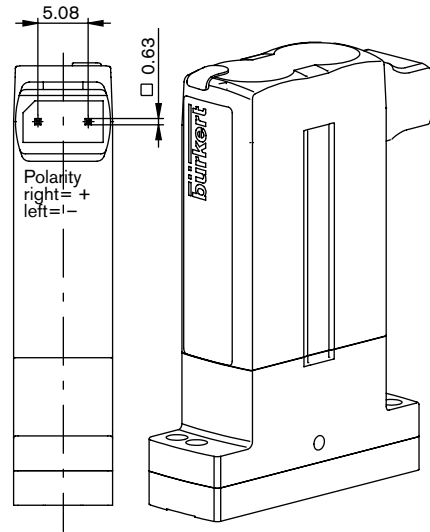
Dimensions [mm] (see datasheet for further Details)



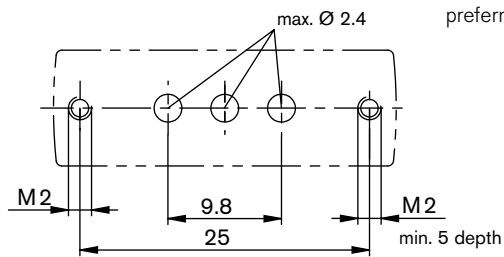
**Electrical connections: flying leads**



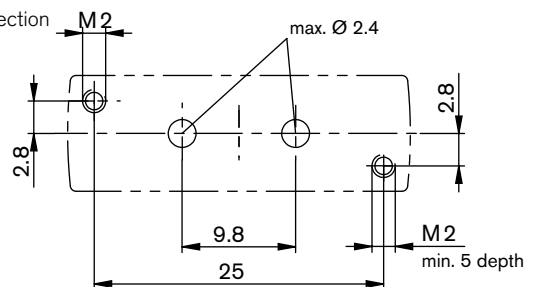
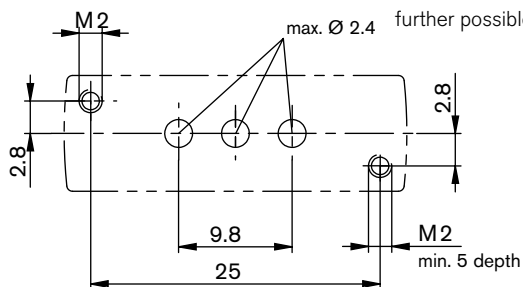
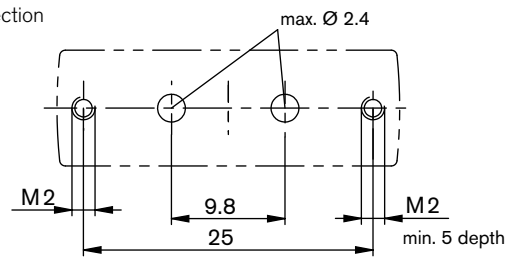
**Electrical connections: rectangular plug**



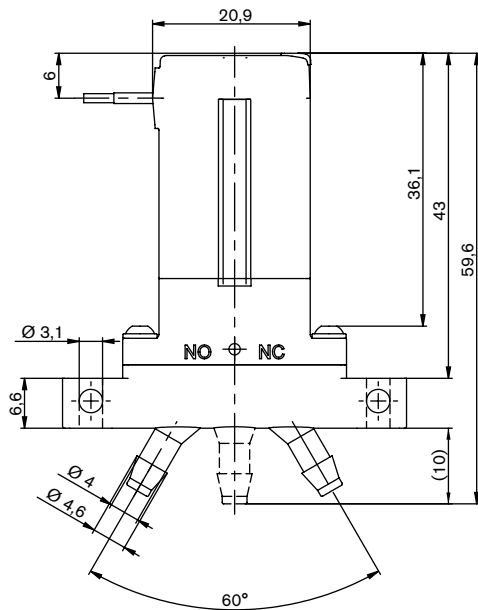
Sub-base body for 3/2-way connection



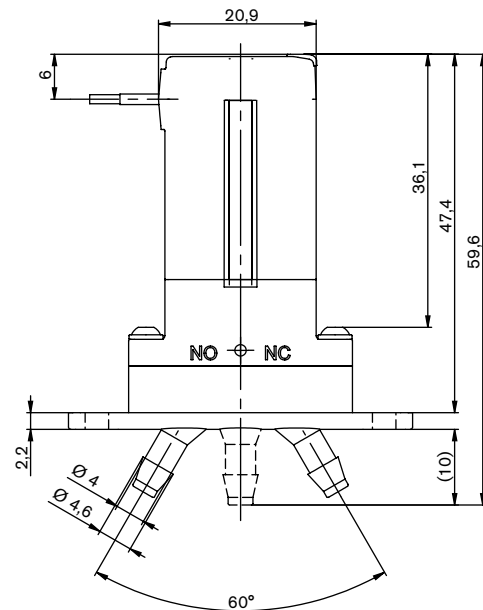
Sub-base body for 2/2-way connection



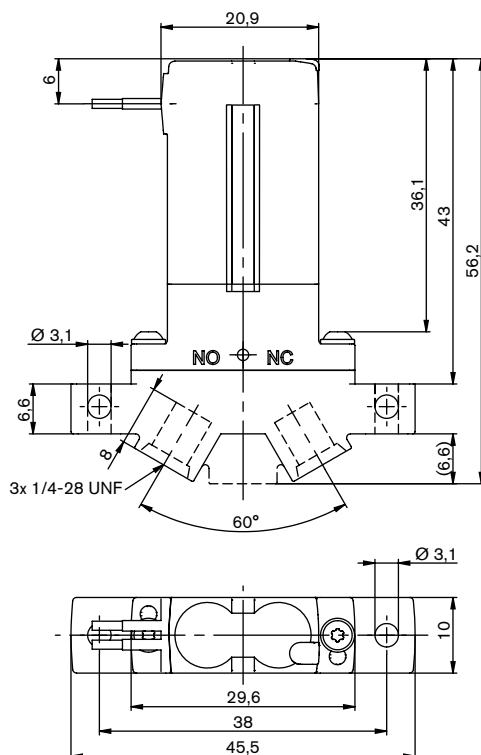
Tube connector housing



Tube connector housing with shield



Body UNF 1/4"-28 Flat-Bottom



## Ordering Chart




Orifice [mm]	Port connection	Kv value water [m <sup>3</sup> /h] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage	Item no.
<b>Circuit function A, 2/2-way valve, normally closed</b>									
0.8	Sub-base	0.01	Vac.-5	5	EPDM	PPS	Rectangular plug <sup>3)</sup>	24	241 399
0.8	UNF	0.01	Vac.-5	5	FFKM	PEEK	Flying leads	24	241 346
1.6	Sub-base	0.04	Vac.-2	2	FFKM	PEEK	Flying leads	24	227 814
1.6	Sub-base	0.04	Vac.-2	2	FKM	PEEK	Rectangular plug <sup>3)</sup>	24	247 043
1.6	UNF	0.04	Vac.-2	2	FFKM	PEEK	Flying leads	24	241 361
1.6	UNF	0.04	Vac.-2	2	FFKM	PEEK	Rectangular plug <sup>3)</sup>	24	241 418
1.6	Tube	0.04	Vac.-2	2	FFKM	PEEK	Flying leads	24	237 705
1.6	Sub-base	0.04	Vac.-2	2	FFKM	PEEK	Flying leads	24	242 530
<b>Circuit function T, 3/2-way valve, Universal functions</b>									
0.8	Sub-base	0.01	Vac.-5	5	EPDM	PPS	Rectangular plug <sup>3)</sup>	24	241 429
0.8	UNF	0.01	Vac.-5	5	FFKM	PEEK	Flying leads	24	241 375
1.6	Sub-base	0.04	Vac.-2	2	FFKM	PEEK	Flying leads	24	227 815
1.6	UNF	0.04	Vac.-2	2	FFKM	PEEK	Rectangular plug <sup>3)</sup>	24	241 448
1.6	UNF	0.04	Vac.-2	2	FFKM	PEEK	Flying leads	24	241 389
1.6	Tube	0.04	Vac.-2	2	FFKM	PEEK	Flying leads	24	241 387

<sup>1)</sup> Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.

<sup>2)</sup> Measured as overpressure with respect to atmospheric pressure.

<sup>3)</sup> Rectangular cable, Type 2505 please order separately, for selection options, see accessories

## Ordering chart for accessories

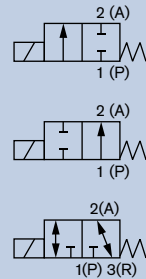
Accessories	Features	Item no.
	Rectangular plug Type 2505 with 3 m cable	133 486
	Rectangular plug Type 2505 with 300 mm flying leads	644 068
	Rectangular plug Type 2505, single contact for individual mounting	644 067
Gasket for tube connector housing with shield	EPDM, foamed	685 294

## 2/2- and 3/2-way Solenoid Valve for analytical applications

6626

### TwinPower

- 16 mm Installation width
- Orifice DN2.0-3.0 mm
- Media separated, for aggressive fluids
- High back pressure tightness
- Direct-acting
- Suitable vacuum



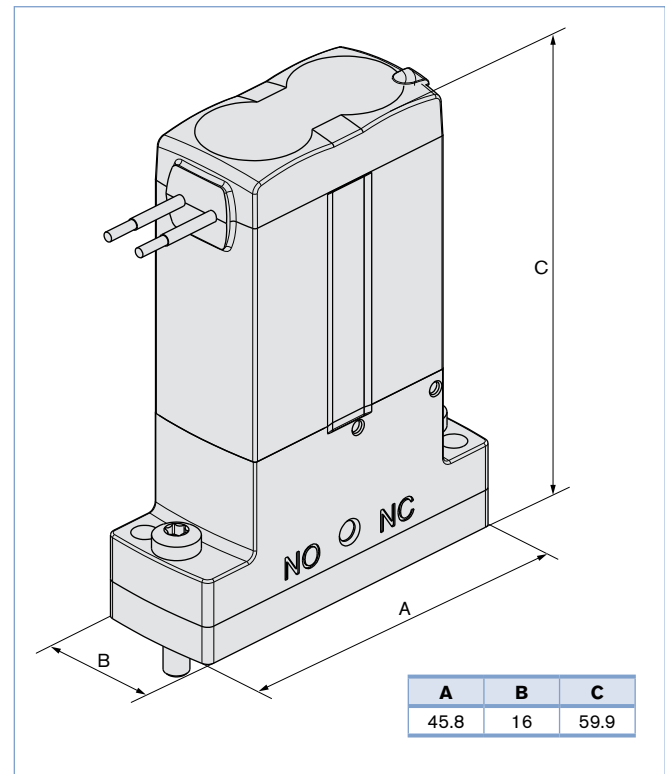
Our revolutionary Twin-power technology operates with two coils. The innovative drive concept is combined with the proven rocker principle. The integrated power reduction decreases the energy consumption by 75% and has the same features as a traditional 22 mm unit. In combination with other design features the heat transfer into the medium can be reduced to a minimum.

In the design of the 6626, the main benefits lie in its excellent cleanability and a high reliability. By using high performance materials the 6626 suits the handling of aggressive medium perfectly. The valve is available in a 2/2-way and 3/2-way version.

### Technical data

<b>Orifice</b>	DN2.0-3.0 mm
<b>Body material</b>	PEEK, PPS
<b>Seal material</b>	FFKM, FKM, EPDM
<b>Medium</b>	Resistant to neutral and aggressive fluids and gases; see Bürkert resistance table
<b>Medium temperature</b>	
FFKM	+15 °C to +50 °C
FKM	-10 °C to +50 °C
EPDM DN2.0	-10 °C to +50 °C
EPDM DN3.0	+5 °C to +50 °C
<b>Ambient temperature</b>	
FFKM	+15 °C to +55 °C
FKM	-10 °C to +55 °C
EPDM DN2.0	-10 °C to +55 °C
EPDM DN3.0	+5 °C to +55 °C
<b>Internal volume</b>	<470 µl
<b>Port connection</b>	Flange, UNF, G 1/8", tube
<b>Electrical connection</b>	Flying leads, Rectangular plug Type 2505 (not included)
<b>Operating voltages</b>	24 V <sup>1)</sup> , 12 V <sup>1)</sup>
<b>Voltage tolerance</b>	24 V ±10% <sup>2)</sup> 12 V +10% / -5% <sup>2)</sup>
<b>Nominal power</b>	13.6 W inrush power 3.4 W nominal holding current (internal power reduction)
<b>Duty cycle</b>	Continuous operation 100% ED
<b>Installation</b>	As required
<b>Protection class</b>	IP40
<b>Switching frequency</b>	Max. 2 Hz <sup>3)</sup>
<b>Response times</b>	Acc. ISO 12238
Opening	ca. 10 ms (Pressure rise 0-10%)
Closing	ca. 15 ms (Pressure drop 100-90%)

Dimensions [mm] (see datasheet for further Details)

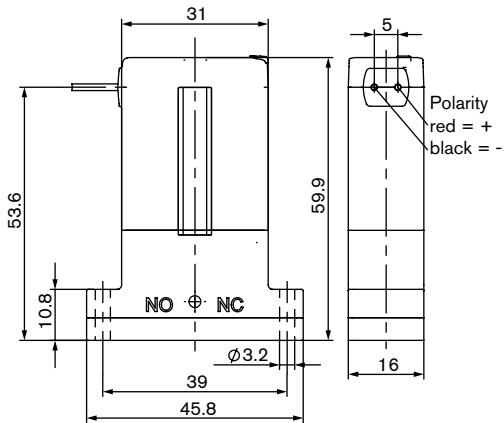


<sup>1)</sup> Battery voltage, check polarity (red= +, black= -)

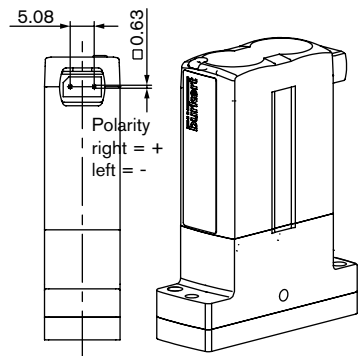
<sup>2)</sup> Max. allowed ripple

<sup>3)</sup> at ambient temperature of 20 °C

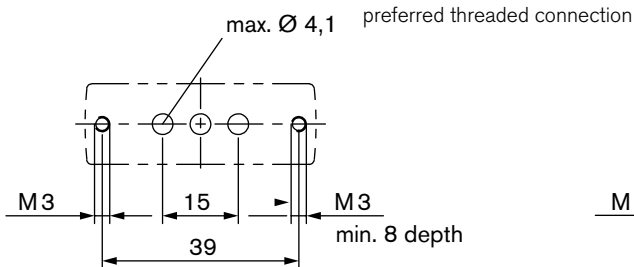
**Electrical connections: flying leads**



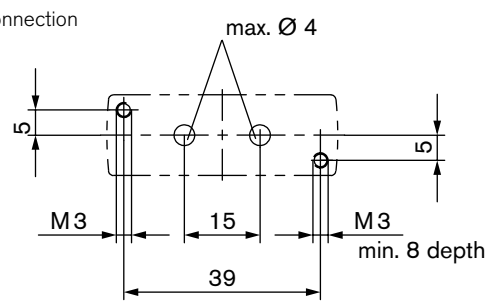
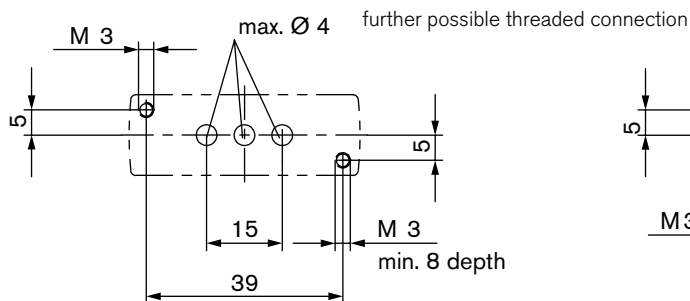
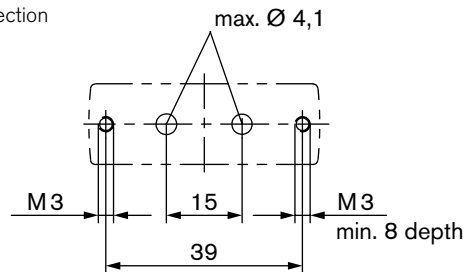
**Electrical connections: rectangular plug**



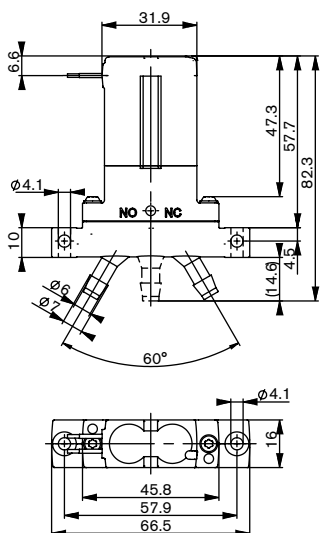
**Sub-base body for 3/2-way connection**



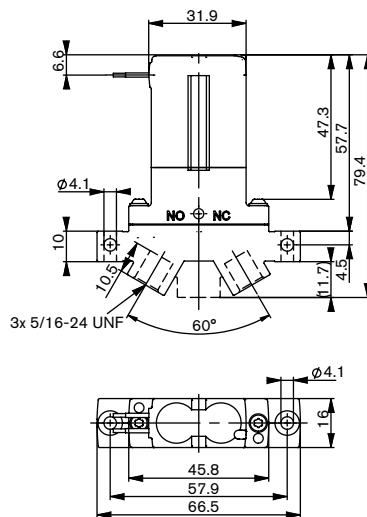
**Sub-base body for 2/2-way connection**



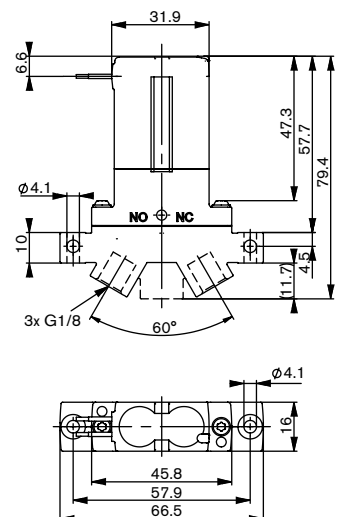
**Body, tube connector**



**Body, UNF 5/16" -24**



**Body, G1/8**





## Ordering chart

6626

Circuit function	Orifice [mm]	Port connection	Kv value water [m <sup>3</sup> /h] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage [V]	Item no.
A 2/2-way valve normally closed	2.0	Sub-base	0.10	Vac. - 3 (Vac. - 5)	3 (5)	EPDM	PPS	Rectangular plug <sup>3)</sup>	12	247 769
									24	247 771
								UNF	Vac. - 3 (Vac. - 4)	3 (4)
		24	247 786							
		G 1/8"	Vac. - 3	3	FFKM	PEEK	Flying leads		251 709	
								252 770		
	3.0	Sub-base	0.19	Vac. - 2	2	EPDM	PPS	Rectangular plug <sup>3)</sup>	24	247 797
									238 530	
								UNF	FFKM	PEEK
		24	247 819							
		Tube	FFKM	PEEK	Flying leads	251 711				
						252 771				
EPDM	Rectangular plug <sup>3)</sup>		252 772							
		247 789								
	FFKM	Flying leads	228 642							
247 810										
B 2/2-way valve normally open	2.0	Sub-base	0.10	Vac. - 3	3	FFKM	PEEK	Flying leads	24	252 773
									242 597	
	3.0	0.19	Vac. - 2	2	FFKM	PEEK	Rectangular plug <sup>3)</sup>	245 910		

<sup>1)</sup> Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.

<sup>2)</sup> Measured as overpressure with respect to atmospheric pressure.

<sup>3)</sup> Rectangular cable to be ordered separately, selection option see accessories.

Info: ( ) Values in brackets apply only for gaseous media.

## Ordering chart

Circuit function	Orifice [mm]	Port connection	Kv value water [m <sup>3</sup> /h] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage [V]	Item no.						
T 3/2-way valve Universal function	2.0	Sub-base	0.10	Vac. - 3 (Vac. - 5)	3 (5)	EPDM	PPS	Rectangular plug <sup>3)</sup>	24	247 826						
								Flying leads	12	247 829						
									24	247 841						
								Rectangular plug <sup>3)</sup>	12	247 838						
									UNF	0.10	Vac. - 3 (Vac. - 4)	3 (4)	FFKM	PEEK	Flying leads	24
								Rectangular plug <sup>3)</sup>							252 774	
	UNF	0.10	Vac. - 3 (Vac. - 4)	3 (4)	FKM	PEEK	Flying leads		24	252 775						
							Rectangular plug <sup>3)</sup>	252 775								
	3.0	Sub-base	0.19	Vac. - 2	2	EPDM		PPS	Rectangular plug <sup>3)</sup>	12	247 851					
							Flying leads		24	247 853						
									Rectangular plug <sup>3)</sup>	234 371						
							FFKM			PEEK	PPS	Flying leads	24	238 531		
									Rectangular plug <sup>3)</sup>			247 874				
							FKM			PEEK	PPS	Flying leads	12	247 877		
									Rectangular plug <sup>3)</sup>			247 877				
							UNF			0.15	Vac. - 2	2	EPDM	PEEK	Rectangular plug <sup>3)</sup>	24
Rectangular plug <sup>3)</sup>									252 776							
							UNF		0.15	Vac. - 2	2	FFKM	PEEK	Flying leads	24	251 715
Rectangular plug <sup>3)</sup>	251 715															
	G 1/8"	0.19	Vac. - 2	2	FKM	PEEK	Rectangular plug <sup>3)</sup>	24	247 872							
Rectangular plug <sup>3)</sup>							247 872									
	Tube	0.19	Vac. - 2	2	EPDM	PEEK	Rectangular plug <sup>3)</sup>	24	247 844							
Rectangular plug <sup>3)</sup>							247 844									
	Tube	0.19	Vac. - 2	2	FFKM	PEEK	Flying leads	24	247 859							
Rectangular plug <sup>3)</sup>							247 859									
	Tube	0.19	Vac. - 2	2	FKM	PEEK	Rectangular plug <sup>3)</sup>	24	247 858							
Rectangular plug <sup>3)</sup>							247 858									
	Tube	0.19	Vac. - 2	2	FKM	PEEK	Flying leads	24	247 869							
Rectangular plug <sup>3)</sup>							247 869									

6626




1) Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.

2) Measured as overpressure with respect to atmospheric pressure.

3) Rectangular cable to be ordered separately, selection option see accessories.

Info: ( ) Values in brackets apply only for gaseous media.

## Ordering chart for accessories

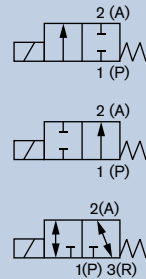
Accessories	Features	Item no.
	Rectangular plug Type 2505 with 3 m cable	133 486
	Rectangular plug Type 2505 with 300 mm flying leads	644 068
	Rectangular plug Type 2505, single contact for individual mounting	644 067

## 2/2- and 3/2-way Solenoid Valve for analytical applications

6628

### TwinPower

- 22 mm Installation width
- Isolating diaphragm for aggressive fluids
- High back-pressure tightness
- Minimal internal volume with good cleanability



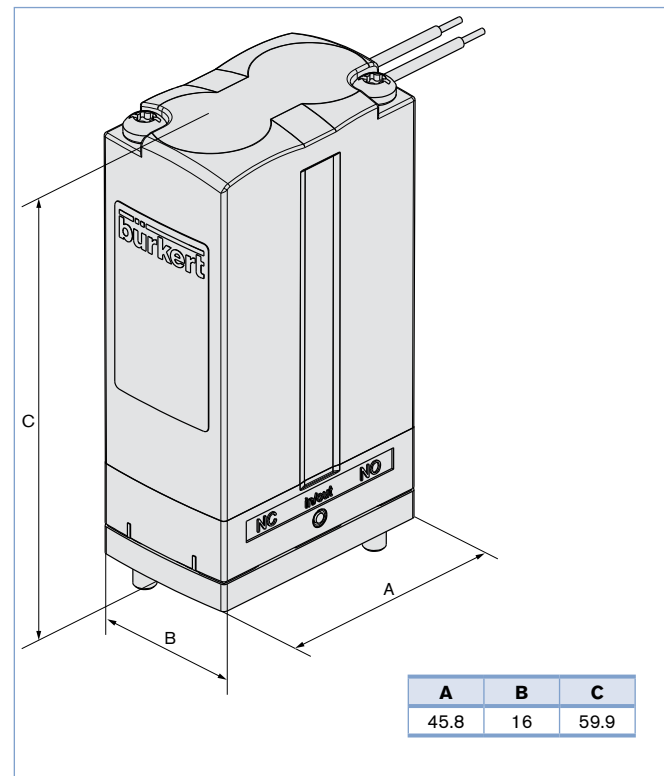
Direct acting medium separated 2/2- and 3/2-way Rocker Solenoid Valve for control of aggressive fluids and gases in analytical medical applications, the food industry, and also the chemical industry for dosing, filling, mixing and distribution.

The medium is in contact with fluid housing and seal material solely through the isolating diaphragm. This valve with the new TwinPower actuator, robust screw-in connection and 22 mm installation width, will fulfil the highest requirements. The established rocker solenoid technology is characterized through full back pressure tightness, good rinsing capability and low internal volume. Type 6628 is available in different technical versions and by virtue of several body options, it offers a perfect adaption in fluid applications.

### Technical data

<b>Orifice</b>	DN2.0 or 3.0 mm
<b>Body material</b>	PEEK or PPS (PVDF, PP on request)
<b>Seal material</b>	FFKM, FKM or EPDM
<b>Medium</b>	Resistant to neutral and aggressive gases and liquids acc. to our chemical resistance chart
<b>Medium temperature</b>	0 °C to +55 °C
FKM, EPDM, FFKM	+10 °C to +55 °C
	-10 °C to +55 °C
<b>Ambient temperature</b>	0 °C to +55 °C
FKM, EPDM, FFKM	+10 °C to +55 °C
	-10 °C to +55 °C
<b>Internal volume</b>	ca. 200 µl
<b>Viscosity</b>	max. ca. 21 mm <sup>2</sup> /s
<b>Electrical connection</b>	<ul style="list-style-type: none"> <li>▪ PFA single flying leads, 0.5 mm<sup>2</sup>, 500 mm</li> <li>▪ Rectangular plug for cable plug Type 2505 (not included)</li> <li>▪ Industry plug acc. to DIN 43650 Form B for cable plug Type 2507 (not included)</li> <li>▪ Circular connector M8 on request</li> </ul>
<b>Operating voltages</b>	24V DC, other voltages on request
<b>Voltage tolerance</b>	±10%
<b>Nominal power</b>	5 W
<b>Duty cycle</b>	100 % continuous operation
<b>Installation</b>	As required, preferably with actuator upright

Dimensions [mm] (see datasheet for further Details)

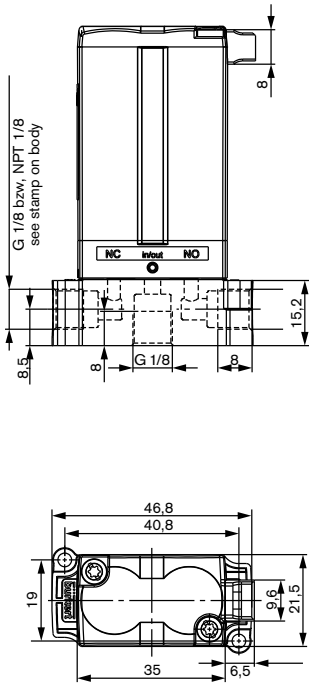


### Technical data (continued)

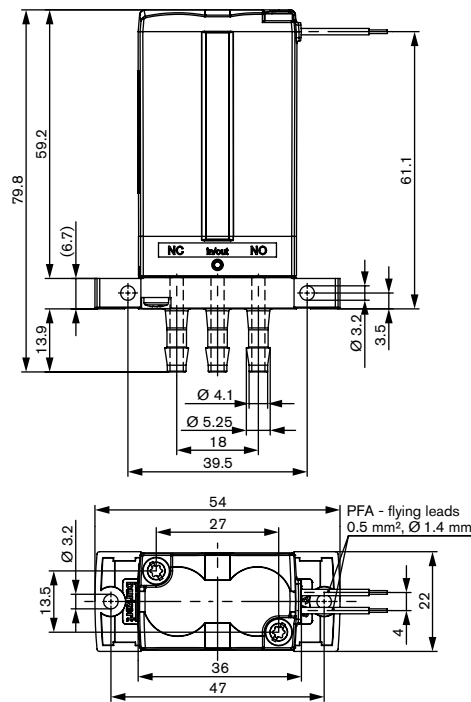
<b>Protection class</b>	IP54 (IP40 with rectangular plug Type 2505)
<b>Response times</b>	Measurement at valve output with 2 bar and 20 °C acc. to DIN ISO 12238:2001
Opening	25 ms (Pressure rise 0-10%)
Closing	25 ms (Pressure drop 100-90%)
<b>Manual override</b>	on request

Dimensions [mm] (see datasheet for further Details)

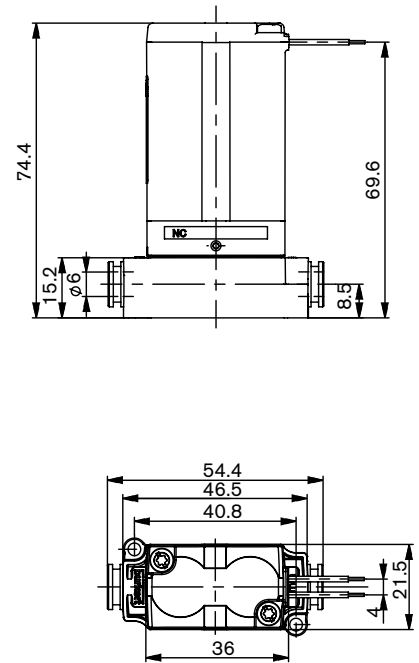
**Threaded version  
with rectangular plug**



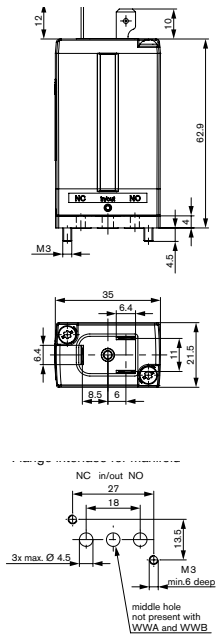
**Barbed hose connector  
with Flying leads**



**Push-in connector**



**Flange version  
for Cable Plug**



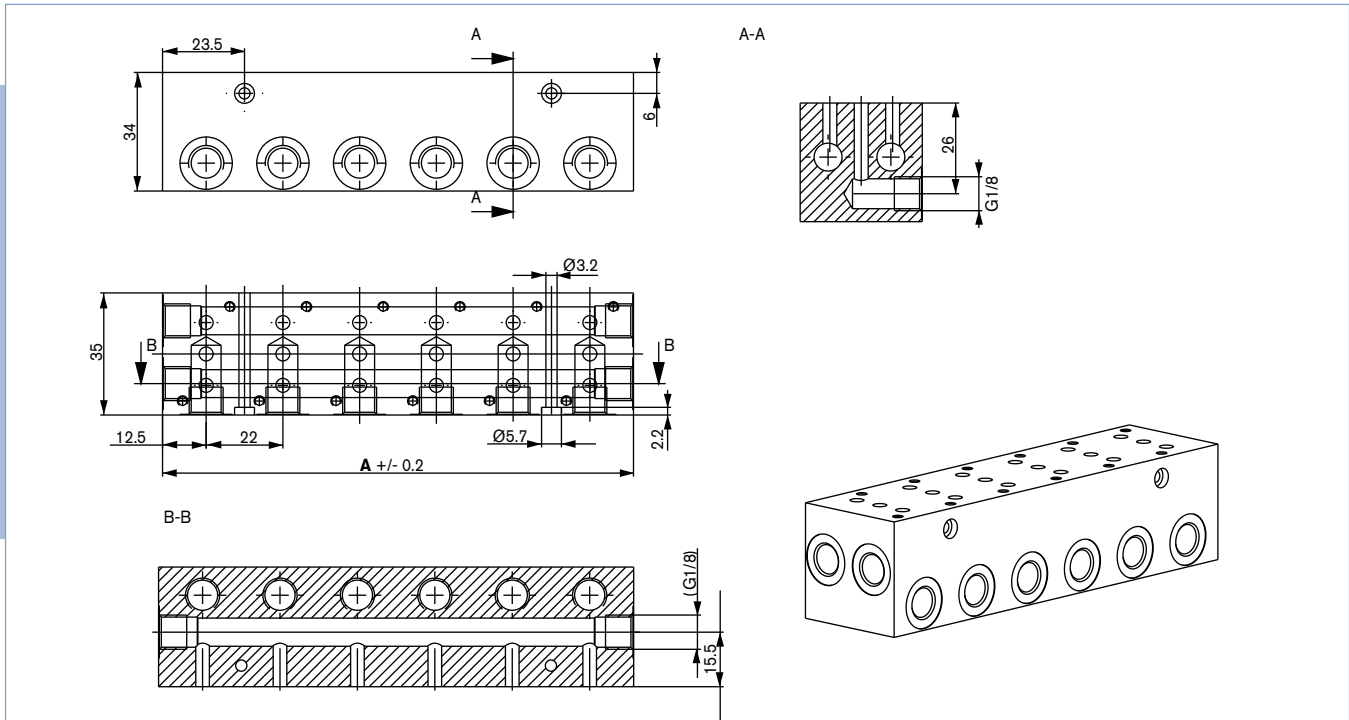
**Classification of fluid connections**

2/2-way valve, normally closed (Circuit function A)  
inflow at "NC"-connector

2/2-way valve, normally open (Circuit function B)  
inflow at "NO"-connector

3/2-way valve, universal (Circuit function T)  
flow as required

## Dimensions for manifold [mm]



## Ordering chart

Orifice [mm]	Port connection	Kv value water [m <sup>3</sup> /h]	QnN-value air [l/min]	Pressure range [bar]	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage/frequency [V/Hz]	Item no.
<b>Circuit function A, 2/2-way valve normally closed</b>										
2	Bürkert-Flange	0.10	110	Vac. - 5	5	EPDM	PPS	Rectangular plug	024/DC	250 857
2	Bürkert-Flange	0.10	110	Vac. - 5	5	FFKM	PEEK	Flying leads 500mm	024/DC	234 350
2	G 1/8"	0.10	110	Vac. - 5	5	FKM	PEEK	Rectangular plug	024/DC	242 713
3	Bürkert-Flange	0.17	180	Vac. - 3	3	FFKM	PEEK	Rectangular plug	024/DC	235 317
3	Bürkert-Flange	0.17	180	Vac. - 3	3	FFKM	PEEK	Plug interface Form B	024/DC	242 721
3	Bürkert-Flange	0.17	180	Vac. - 3	3	FFKM	PEEK	Flying leads 500mm	024/DC	231 013
3	Bürkert-Flange	0.17	180	Vac. - 3	3	FFKM	PEEK	Flying leads 500mm	024/DC	251 686
3	Hose connector	0.17	180	Vac. - 3	3	FFKM	PEEK	Flying leads 500mm	024/DC	235 318
3	G 1/8"	0.17	180	Vac. - 3	3	FFKM	PEEK	Rectangular plug	024/DC	241 807
3	Push-in connection	0.17	180	Vac. - 3	3	FKM	PPS	Flying leads 500mm	024/DC	251 650
<b>Circuit function T, 3/2-way valve, Universal function</b>										
2	Bürkert-Flange	0.10	110	Vac. - 5	5	EPDM	PPS	Rectangular plug	024/DC	250 859
3	Bürkert-Flange	0.17	180	Vac. - 2	2	FKM	PPS	Flying leads 500mm	024/DC	251 635
3	Push-in connection	0.17	180	Vac. - 2	2	FKM	PPS	Flying leads 500mm	024/DC	251 685
3	Bürkert-Flange	0.17	180	Vac. - 2	2	FFKM	PEEK	Flying leads 500mm	024/DC	230 305
3	Hose connector	0.17	180	Vac. - 2	2	FFKM	PEEK	Flying leads 500mm	024/DC	235 323
3	G 1/8"	0.17	180	Vac. - 2	2	FFKM	PEEK	Rectangular plug	024/DC	241 806

Kv value [m<sup>3</sup>/h]: Flow value for water.

Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.

Rectangular cable, Type 2505 please order separately, for selection options, see accessories.



## Ordering chart for manifold

**Multiple Manifolds with individual service port (G 1/8) and diverter function on 2 common channels (G 1/8); Delivery without valves; Material: anodized aluminium**


Manifold	A [mm]	Item no.
2-fold	47	669 571
3-fold	69	672 633
4-fold	91	669 572
5-fold	113	672 661
6-fold	135	669 570
10-fold	223	672 660

Other versions on request.

## Ordering chart for manifold

Accessories	Features	Item no.
	Rectangular plug Type 2505 with 3 m cable	133 486
	Rectangular plug Type 2505 with 300 mm flying leads	644 068

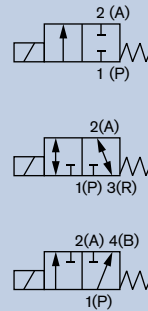
## Cable Plug Type 2507 according to Industrial standard Form B

	Accessories	Version	Voltage	Item no.
	Cable Plug	without Circuitry	0 ... 250 V AC/DC	423 845
		with LED	24 V AC/DC	423 849

## 2/2 and 3/2-way flipper solenoid valve for analytical applications

6650

- Only 4.5 mm wide
- Medium isolation, for aggressive fluids
- Direct-acting
- Short response times

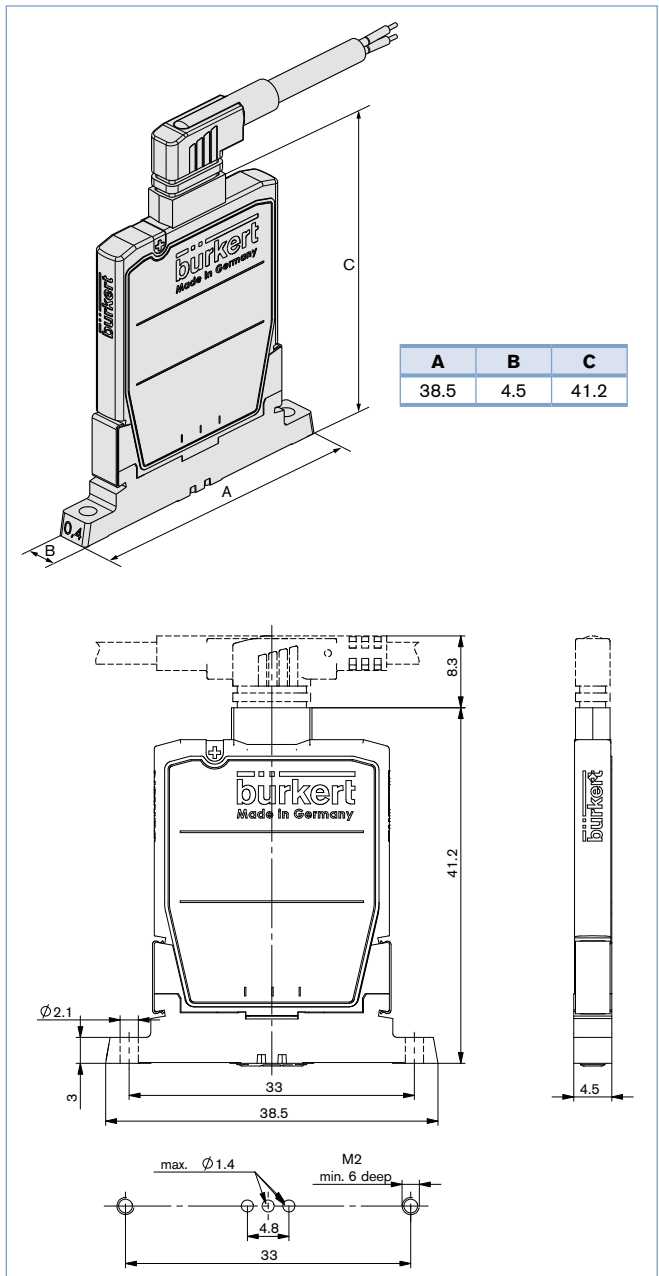


With a width of only 4.5 mm, Type 6650 sets a new standard in medium isolation miniature solenoid valves. The optimized design enables reproducible and precise dosing, good rinsing capability and is suitable for the application of aggressive chemicals owing to the high quality of the materials used. With the two nominal sizes of 0.4 and 0.8 mm, as well as the selection between 2/2-way and 3/2-way function, it is ideal for applications where the highest fluid performances are required in the smallest space. Type 6650 opens up new possibilities, owing to the 4.5 mm station width, in particular in connection with dosing in 384-well microtiter plates.

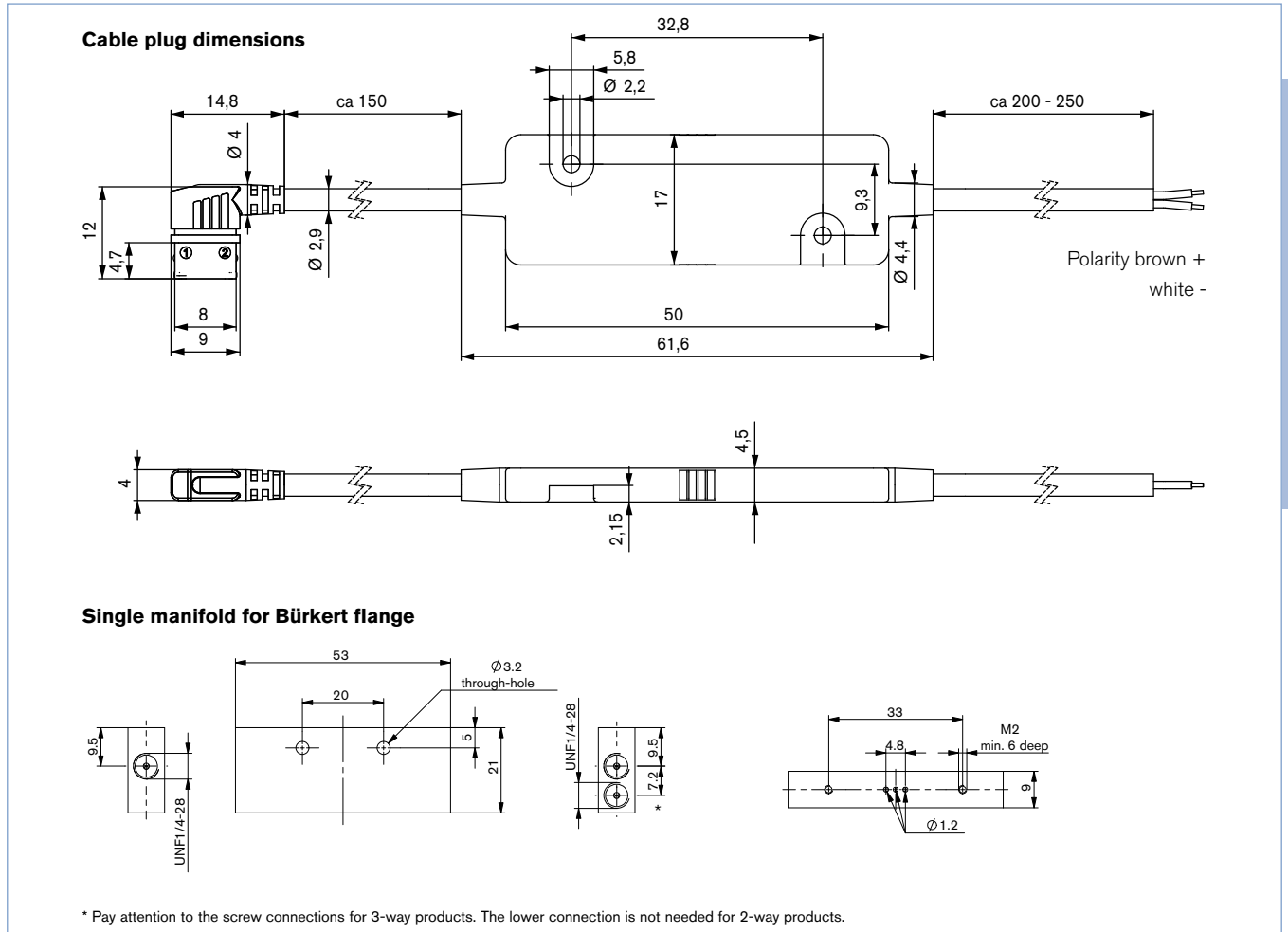
### Technical Data

<b>Orifice</b>	DN0.4 and 0.8 mm
<b>Body material</b>	PEEK
<b>Seal material</b>	FFKM (Simriz)
<b>Medium</b>	Resistant to neutral and aggressive fluids and gases; see Bürkert resistance table
<b>Medium temperature</b>	+15 °C to +50 °C
<b>Ambient temperature</b>	+10 °C to +50 °C
<b>Internal volume</b>	approx. 30 µl
<b>Port connection</b>	Flange
<b>Electrical connection</b>	Plug Bürkert Type 2504 (not included)
<b>Operating voltages</b>	24V (12V on request)
<b>Voltage tolerance</b>	±10%
<b>Nominal power</b>	5.7 W For 100% duty cycle power has to be reduced externally.
<b>Duty cycle</b>	100% continuous operation only with external power reduction
<b>Installation</b>	As required; with side by side connection standard polarity is adhered to
<b>Protection class</b>	IP65
<b>Switching frequency</b>	80Hz (for mechanical limit observe maximum temperature) 15Hz (continuous with external power reduction, for more information see manual)
<b>Response times</b>	<5 ms (acc. to ISO 12238)

Envelope Dimensions [mm] (see datasheet for details)



Envelope Dimensions [mm] (see datasheet for details)



Ordering Chart

Circuit function	Orifice [mm]	Kv value water [m/h] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Max. pressure difference [bar]	Voltage [V]	Nominal power [W] (Inrush-/nominal holding power)	Item no.
A 2/2-way valve normally closed	0.4 <sup>3)</sup>	0.004	Vac.-7	7	24	5.7 / 0.7	182 284
	0.8 <sup>4)</sup>	0.01	Vac.-3	3	24	5.7 / 0.7	226 664
T 3/2-way valve universal version	0.8	0.01	Vac.-1	1	24	5.7 / 0.7	189 292
F 3/2-way valve distributor valve	0.8	0.01	Vac.-3	3	24	5.7 / 0.7	227 020

<sup>1)</sup> Measured at +20 °C, 1 bar pressure at valve inlet and free outlet  
<sup>2)</sup> Measured as overpressure to the atmospheric pressure  
<sup>3)</sup> With orifice 0.4 mm flow permitted in both directions  
<sup>4)</sup> With orifice 0.8 mm flow direction according to label

Accessories

Description	Item no.
Cable plug type 2504 with integrated hit and hold electronic, 024V/DC, 500 mm long, Power reduction to 0.7 W after 5 ms	670 178
Cable plug type 2504, single cable, 500 mm long <sup>1)</sup>	670 164
Cable plug type 2504, single cable, 5000 mm long <sup>1)</sup>	680 840
Single manifold material Peek	670 181

<sup>1)</sup> The valve must be operated with external power reduction. Please refer to the manual for further details.



# Control Electronics for Solenoid Control Valves

8605

- Microprocessor-controlled electronics
- Selectable input signal
- Adjustable PWM frequency
- Optional RS232 or RS485 interface

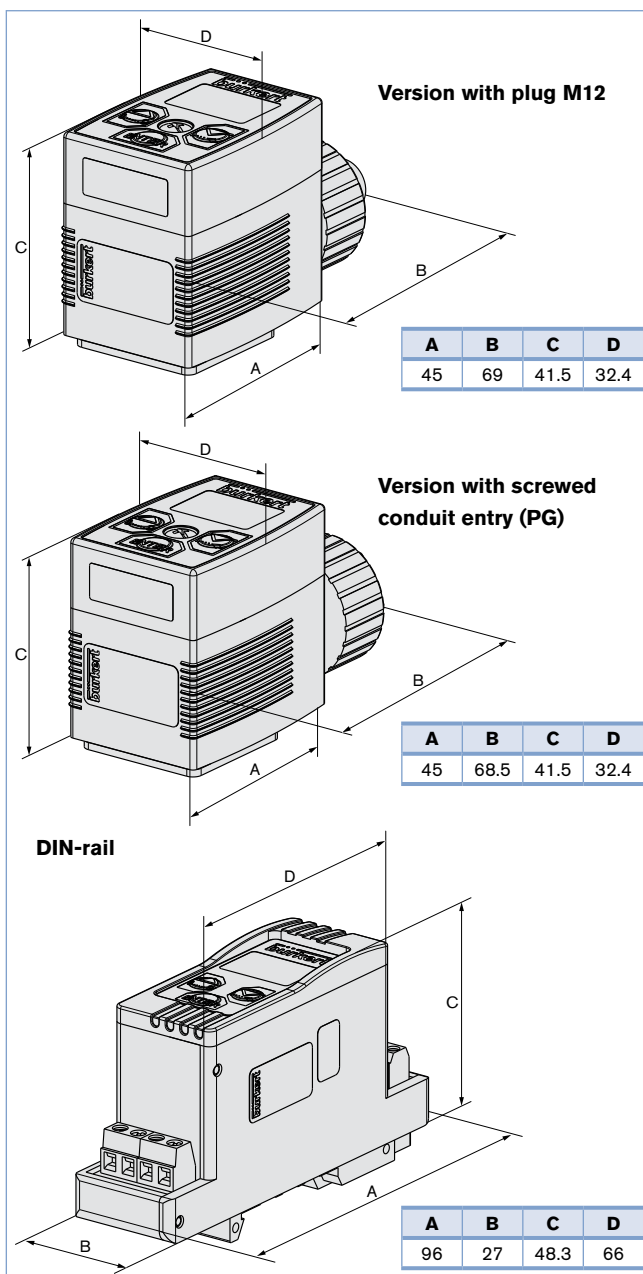


The digital control electronics, Type 8605, serves to operate valves in the power range from 40 - 2000 mA. The electronics converts an external standard signal into a pulse-width modulated (PWM) signal with which the opening of the valve and hence a fluidic output parameter (e.g. flow rate) can be infinitely varied. An internal current control with the duty cycle factor of the PWM signal as control variable ensures that every value of the input signal, irrespective of the thermal condition of the coil, is unambiguously assigned a given value of the effective coil current. Compared to DC operation of solenoid control valves the PWM operation improves, among others, their sensitivity and hysteresis. A display and operating keys allow the electronics to be easily adapted to a particular solenoid control valve and to the concrete conditions of an application.

## Technical Data

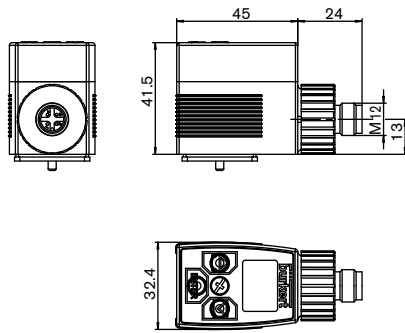
<b>Operating voltage</b>	12V DC or 24 V DC
<b>Voltage tolerance</b>	±10%
<b>Residual ripple</b>	<5%
<b>Power consumption</b>	approx. 1 W (without valve)
<b>Output current (valve)</b>	Max. 2 A
<b>Ambient temperature</b>	-10 °C to 60 °C
<b>Input signal</b>	0-20 mA, 4-20 mA or 0-5 V, 0-10 V (configurable)
<b>Input impedance</b>	<200 Ω (with current input) >20 kΩ (with voltage input)
<b>Output signal for valve control</b>	PWM signal – frequency adjustable from 80 Hz to 6 kHz
<b>Ramp function</b>	Time variable from 0 to 10 s
<b>Version</b>	Cable plug for direct installation (with PG or M12 connection) DIN-rail version (DIN EN 50022)
<b>Protection class</b>	Cable plug – IP65 DIN-rail – IP40
<b>Housing material</b>	Cable plug – Polyamide / PC DIN-rail – Polyamide / PBT

## Envelope Dimensions [mm] (see datasheet for details)

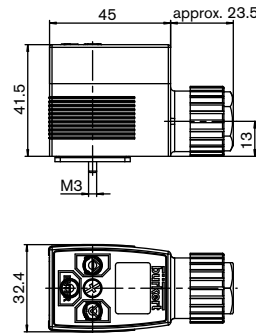


**Cable plug with operating unit**

Version with plug M12

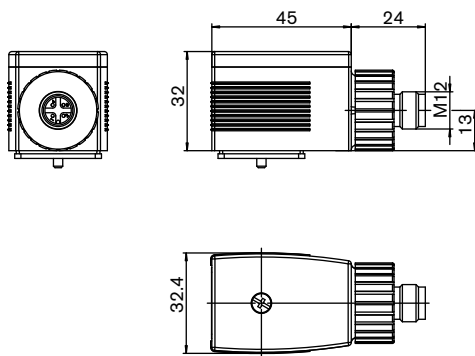


Version with screwed conduit entry (PG)

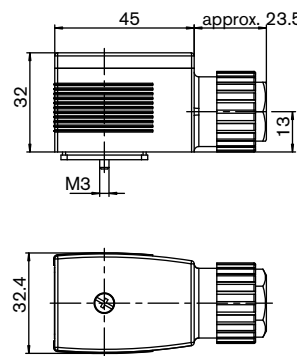


**Cable plug without operating unit**

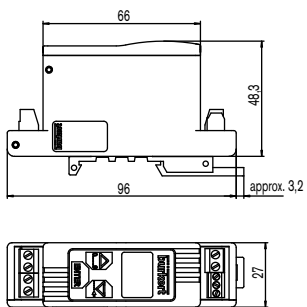
Version plug M12



Version with screwed conduit entry (PG)



**DIN-rail**



## Ordering Chart

8605

Version	Max. coil current [mA]	Item no.	2861, 2871 24 V DC	2861, 2871 12 V DC	2863, 2873 24 V DC	2863, 2873 12 V DC	2865, 2875 24 V DC	2865, 2875 12 V DC	2836 24 V DC	6024 24 V DC	6024 12 V DC	6223 24 V DC	6223 12 V DC
Cable plug with PG-connection	200 - 1000	178 354			x	x	x			x		x	
Cable plug with M12-connection	200 - 1000	178 355			x	x	x			x		x	
Cable plug with PG-connection	500 - 2000	178 356				x	x	x	x	x	x		x
Cable plug with M12-connection	500 - 2000	178 357				x	x	x	x	x	x		x
Cable plug with PG-connection without control unit	200 - 1000	178 358			x	x	x			x		x	
Cable plug with M12-connection without control unit	200 - 1000	178 359			x	x	x			x		x	
Cable plug with PG-connection without control unit	500 - 2000	178 360				x	x	x	x	x	x		x
Cable plug with M12-connection without control unit	500 - 2000	178 361				x	x	x	x	x	x		x
DIN-rail	40 - 220	178 362	x										
DIN-rail	200 - 1000	178 363	x	x	x	x	x			x		x	
DIN-rail	500 - 2000	178 364				x	x	x	x	x	x		x

### Notes:

- With two current ranges possible please choose the lower one
  - Successor types:
    - 2861, 2871 with 2822, 2824
    - 2863, 2873 with 2833
    - 2865, 2875 with 2835
- When using the older type please choose the control electronics indicated for the adequate new type.

## Accessories

Version	Item no.
M12 connector, 4 pins, 5 m cable	918 038
Right-angle plug M12, 4 pins	784 301
Control unit for plug on module	667 839
RS232 module for plug on module	667 840
RS485 module for plug on module	667 841
RS232 module for DIN-rail	667 842
RS485 module for DIN-rail	667 843
Cable for RS232/ 485 interface M8 for plug on module	918 718
Cap with screw and seal	670 549



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# ATEX Solenoid Valves for Hazardous Locations

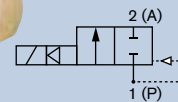
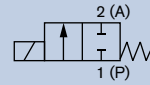
## G 1/8" to G 2"

- Valves for use in Zone 1
- Type 6013 ATEX: Direct acting through-way valve
- Type 6281 EV ATEX: Pilot operated through-way valve
- Type 5282 ATEX: Medium separated through-way valve

Type 6281 EV ATEX



Type 6013 ATEX



Type 5282 ATEX



## Technical Data

	5282 ATEX	6013 ATEX	6281 EV ATEX
<b>Size range</b>	1/2" to 2"	1/8" and 1/4"	1/2" to 2"
<b>Temperature media</b>	0 °C to +70 °C	-10 °C to +100 °C	FKM 0 °C to +90 °C, NBR -10 °C to +80 °C
<b>Surface temperature</b>	T5 = +100 °C	T4 = 135 °C	T4 = 135 °C
<b>Body material</b>	Brass or Stainless steel 1.4581	Brass or Stainless steel 1.4305	Brass or Stainless steel
<b>Seal material</b>	NBR or FKM	FKM	NBR or FKM
<b>Power consumption</b>	DC: 40 W (inrush) 3 W (hold)	DC: 9 W	DC: 9 W
<b>Protection class</b>	IP65	IP65, NEMA4	IP65
<b>Electrical connection</b>	With molded-in cable, 3 m long or with terminal box (without fuse)	With molded-in cable, 3 m long	With molded-in cable, 3 m long
<b>Accreditations</b>	PTB 03 ATEX 1030X II 2G, II 2D, IEC Ex PTB 05.0026X, Ex ed IIC T5 or Ex es mb IIC T5 or Ex ed ia IIC T5 or Ex ed mb ia IIC T5, Ex tD A21 IP65 T +100 °C	PTB 00 ATEX 2129X Ex m II T4, II 2G, II 2D IP65, Tu -30 °C to +60 °C	PTB 00 ATEX 2129X Ex m II T4, II 2G, II 2D IP65, Tu -30 °C to +60 °C
<b>Override</b>	Manual override as standard	Optional	Optional

## Options

- **Type 6013 ATEX** – normally open
- **Type 6281 EV ATEX** – normally open
- **Type 5282 ATEX** – normally open

This page shows only a small example of the complete range.

## Ordering Chart

5282 ATEX, Pressure range: 0.5 - 10 bar					
Port [inch]	Orifice [mm]	Kv Value [m³/h]	Seal material	Item no.	
				24V AC&DC	230V AC&DC
<b>Brass</b>					
G 1/2	13	4	NBR	138 171	138 173
G 3/4	20	5	NBR	138 174	138 176
G 1	25	10	NBR	138 177	138 179
G 1 1/2	40	20	NBR	138 183	138 185
G 2	50	40	NBR	138 186	138 188
<b>Stainless steel</b>					
G 1/2	20	5	FKM	138 228	138 230
G 3/4	20	5	FKM	138 231	138 233
G 1	25	10	FKM	138 234	138 236
G 1 1/2	40	20	FKM	138 240	138 242
G 2	50	40	FKM	138 243	138 245

ATEX Select

## Envelope Dimensions [mm] (see datasheet for details)

**Version with terminal box**

**Version with molded cable**

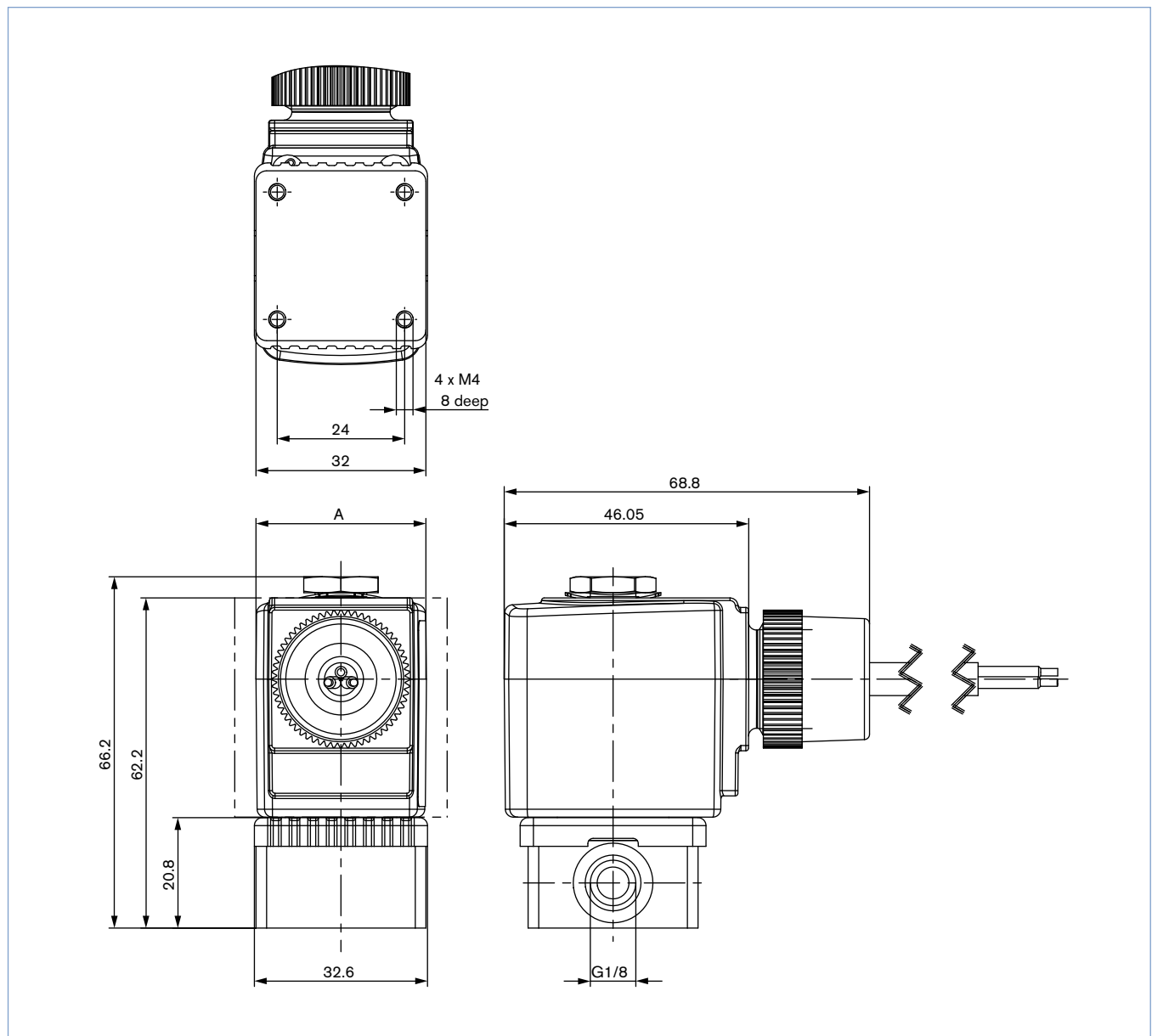
DN	D	B1	E1	F	L1	H1	H2
13	G 1/2	123.0	40	14	65	180.0	123.0
20	G 1/2	131.0	60	14	100	188.0	131.0
20	G 3/4	131.0	60	16	100	188.0	131.0
25	G 1	141.0	70	18	115	198.0	141.0
32	G 1 1/4	147.0	85	20	126	204.0	147.0
40	G 1 1/2	156.0	85	22	126	213.0	156.0
50	G 2	177.5	115	24	164	234.5	177.5
65	G 2 1/2	185.0	115	27	180	242.0	185.0

## Ordering Chart

ATEX Select

6013 ATEX					
Port [inch]	Orifice [mm]	Kv Value [m <sup>3</sup> /h]	Pressure range [bar]	Item no.	
				024V AC&DC	230V AC&DC
<b>Brass</b>					
G 1/8	2	0.12	0 - 10	278 592	136 041
	3	0.23	0 - 5	136 045	136 047
G 1/4	2	0.12	0 - 10	278 605	139 894
	3	0.23	0 - 5	278 594	136 050
<b>Stainless steel</b>					
G 1/8	2	0.12	0 - 10	278 584	136 029
	3	0.23	0 - 5	278 586	136 032
G 1/4	2	0.12	0 - 10	278 601	139 889
	3	0.23	0 - 5	278 87	136 035

## Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

6281 EV ATEX, Pressure range: 0.2 - 16 bar				
Port connection [inch]	Orifice [mm]	Kv value water [m <sup>3</sup> /h]	Item no. voltage/frequency [V/Hz]	
			024/UC ATEX	230/UC ATEX
<b>Brass body, Seal material NBR</b>				
G 1/2	13	3.8	228 405	228 406
G 3/4	20	8.5	228 407	228 408
G 1	25	12	228 409	228 410
G 1 1/4	25	12	228 411	228 412
G 1 1/2	40	30	228 413	228 414
G 2	40	30	228 415	228 416
<b>Stainless steel body, Seal material FKM</b>				
G 1/2	13	3.8	228 417	228 418
G 3/4	20	8.5	228 419	228 420
G 1	25	12	228 421	228 422
G 1 1/4	25	12	228 423	228 424
G 1 1/2	40	30	228 425	228 426
G 2	40	30	228 427	228 428

ATEX Select

## Envelope Dimensions [mm] (see datasheet for details)

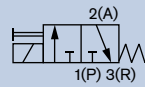
Coil size	DN	A	B	C	D	E	F1	G		H	J	K	L	SW	N
								G1	H						
5	13	87.2	100.7	42	54.5	27.25	12	G 3/8	32	20.5	45	58	27	-	
		87.2	100.7			32.5	14	G 1/2				65	27		
		89.2	105.2			32.5	16	G 3/4				65	32		
	20	95.7	111.7	60	74	37	16	G 3/4	32	20.5	45	80	32	10	
		98.2	118.7			37.5	18	G 1				80	41		
		102.7	123.2			46	18	G 1				95	41		15
	107.7	132.7	46	20	G 1 1/4	95	50								
	40	121.7	151.7	99	114	61	22	G 1 1/2	32	20.5	45	126	60	23	
		127.7	162.7			64	24	G 2				132	70		
		116.1	151.1			82	24	G 2				164	70		37
	115.8	158.3	89.5	27	G 2 1/2	179	85								
	6	13	87.2	100.7	42	54.5	27.25	12	G 3/8	40	23.5	51	58	27	-
87.2			100.7	32.5			14	G 1/2	65				27		
89.2			105.2	32.5			16	G 3/4	65				32		
20		95.7	111.7	60	74	37	16	G 3/4	40	23.5	51	80	32	10	
		98.2	118.7			37.5	18	G 1				80	41		
		102.7	123.2			46	18	G 1				95	41		15
107.7		132.7	46	20	G 1 1/4	95	50								
40		121.7	151.7	99	114	61	22	G 1 1/2	40	23.5	51	126	60	23	
		127.7	162.7			64	24	G 2				132	70		
		116.1	151.1			82	24	G 2				164	70		37
115.8		158.3	89.5	27	G 2 1/2	179	85								



## 3/2-way Solenoid Valve with banjo coupler and bolt for direct mounting to pneumatic actuators

### G 1/4"

- Robust pivot operated solenoid valve with manual override
- Direct and quick mounting on process valves
- Fast-acting
- For neutral gases and compressed air
- Long service life, even in non-lube conditions



In Type 0331 P the magnetic system and the Medium chamber are separated from one another by a separating diaphragm system. The valve is fast acting and has a long service life, even when run dry.

### Technical Data

<b>Orifice</b>	DN2.0–3.0 mm
<b>Body and seat materials</b>	Brass
<b>Coil material</b>	Epoxy
<b>Coil insulation class</b>	H
<b>Seal material</b>	NBR, FKM, EPDM
<b>Medium</b>	
NBR	Neutral Medium such as compressed air, water, hydraulic oil
FKM	Hot air
EPDM (on request)	Oil and fat-free Medium
<b>Medium temperature</b>	
NBR	0 °C to +80 °C
FKM	0 °C to +90 °C
EPDM	– 30 °C to +90 °C
<b>Ambient temperature</b>	Max. +55 °C (min. temperature see Medium temperature)
<b>Viscosity</b>	Max. 37 mm <sup>2</sup> /s
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (supplied as standard)
<b>Protection class</b>	IP65 with cable plug
<b>Installation</b>	as required, preferably with actuator upright
<b>Response times</b>	
AC opening/closing [ms]	8-15
DC opening/closing [ms]	10-20

Measured at valve outlet at 6 bar and +20 °C

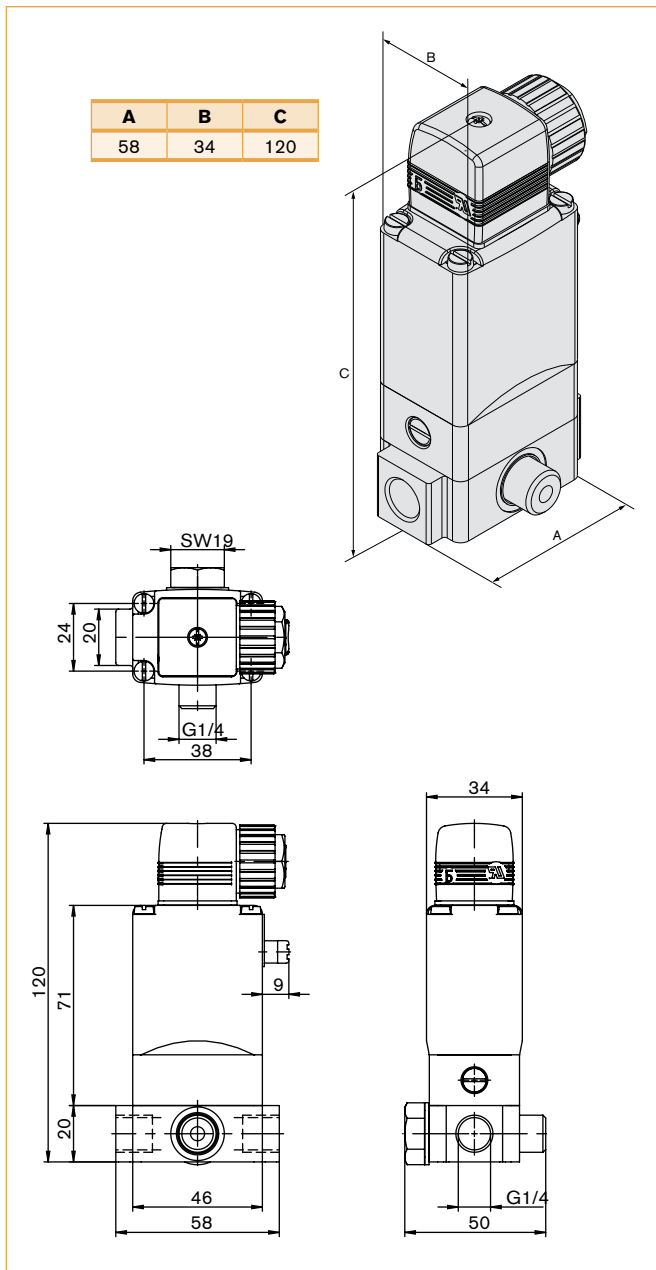
Opening: pressure build-up 0 to 90%, closing: pressure relief 100 to 10%

Power consumption			
Inrush		Hold (hot coil)	
AC [VA]	DC [W]	AC [VA/W]	DC [W]
30	8	15/8	8

### Options

- Electrical position feedback
- Version without manual override

### Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

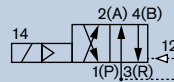
Circuit function	Port connection [Inch]	Orifice [mm]	Kv-value water [m <sup>3</sup> /h]	Pressure range [bar] <sup>1)</sup>	Seal material	Body material	Voltage/frequency [V/Hz]	Item no.
C 3/2-way valve NC	G 1/4	2.0	0.08	0 – 16	NBR	Brass	024/DC	041 191
			0.11				230/50	041 192
	G 1/4	3.0	0.14	0 – 10	EPDM	Brass	024/DC	042 462
			0.18		FKM	Brass	230/50	041 233
			0.14		NBR	Brass	024/DC	041 217
			0.18		024/50	041 219		
					230/50	041 228		

<sup>1)</sup> Please be aware that the above valves cannot be used for vacuum

## 4/2-way Solenoid Valve for pneumatic systems

### G 1/4", DN6 mm

- Robust servo piston valve
- Manual override as standard
- Suitable for single valve or manifold mounting



Type 5413 is a pilot-operated 4/2-way solenoid valve with servo piston. A minimum differential pressure of 1 bar is needed for switch-over. The valve can be combined on one or two-channel connection plates with a common compressed air supply and exhaust air collected at valve batteries. Manual override as standard

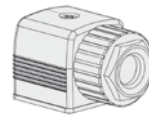
### Technical data

<b>Body material</b>	Polyamide with pressed metal threaded inserts
<b>Operating voltage</b>	24V DC, 24/110/230 V/50-60 Hz
<b>Electrical power consumption</b>	AC inrush 11 VA, AC hold 6/2 VA/W, DC 2 W
<b>Valve internals</b>	Stainless steel
<b>Voltage tolerance</b>	±10%
<b>Seal material</b>	NBR
<b>Duty cycle</b>	ED 100%
<b>Medium</b>	neutral media, e.g. lubricated or non-lubricated compressed air
<b>Electrical Connection</b>	Tag connector acc. to DIN EN 175301-803 (previously DIN 43650) Form A for cable plug, Type 2508 (not included)
<b>Media temperature</b>	-10 °C to 60 °C
<b>Ambient temperature</b>	Max. 55 °C
<b>Type of protection</b>	IP65 (with Cable Plug)
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times [ms]</b>	
Opening	50 ms (Pressure rise 0 to 90%)
Closing	30 ms (Pressure drop 100 to 10%)
	Measurement at the valve outlet, at 6 bar and +20 °C

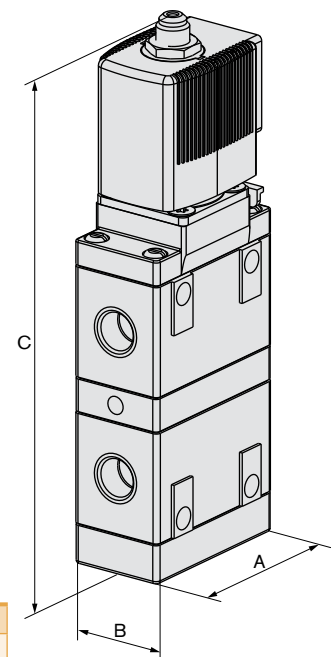
### Options/Accessories

- Cable Plug Type 2508
- ATEX versions

Dimensions [mm] (see datasheet for further Details)

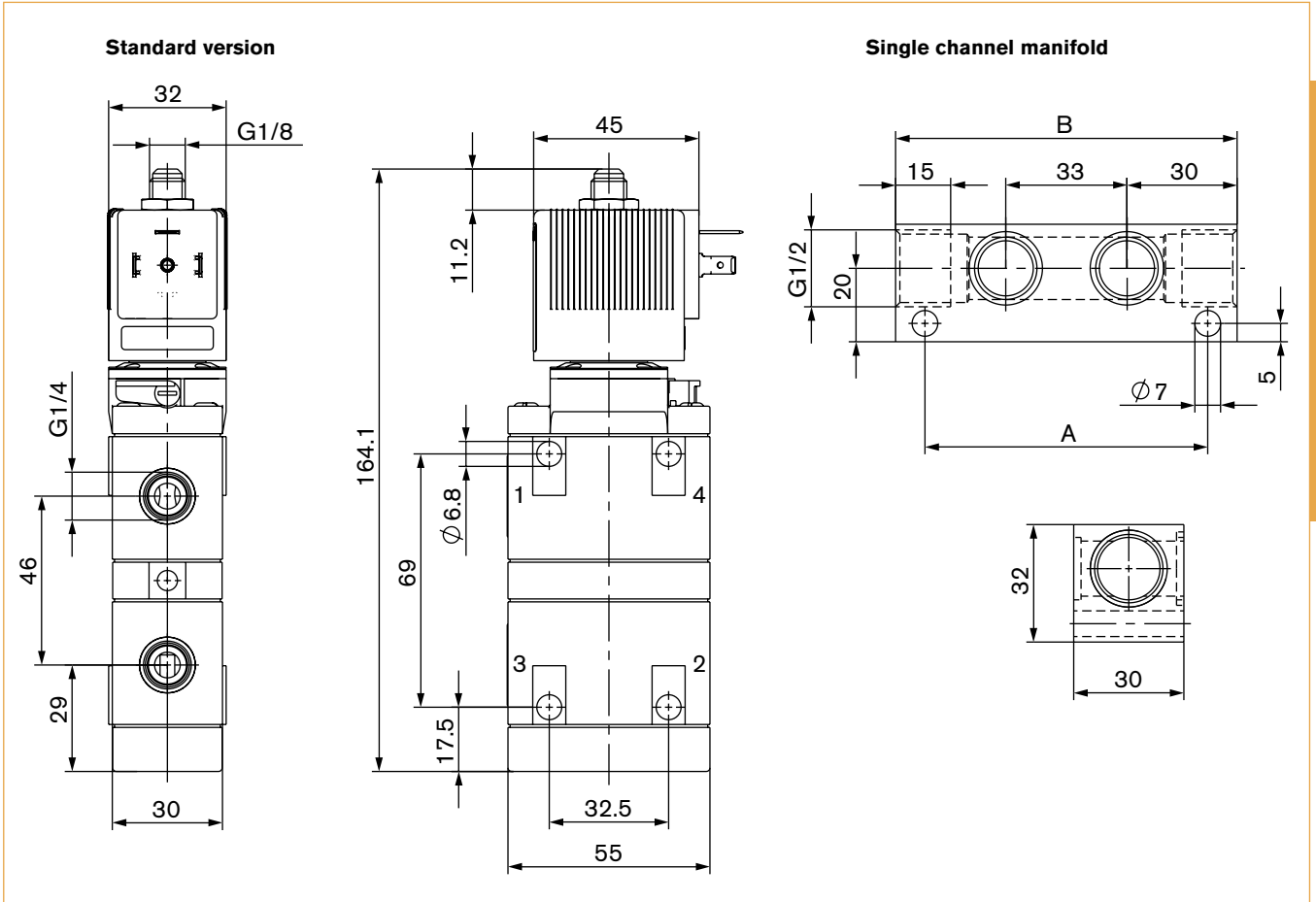


2508 Cable Plug  
Form A not included



A	B	C
55	30	164.1

Dimensions [mm] (see datasheet for further Details)



5413

### Ordering chart

Circuit function	Orifice DN [mm]	Port connection [inch]	Qn Value air [l/min]	Pressure range [bar]	Voltage / Frequency [V/Hz]	Item no.
<b>Polyamide body with manual override</b>						
G 4/2-way valve	6	G 1/4	900	1 – 10	024/DC	134 615
					024/50 - 60	134 616
					110/50 - 60	134 617
					230/50 - 60	134 618

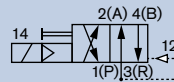
### Accessories

No. of valves	Item no.
<b>Single-channel connection plates (for common pressure connection) made of light metal (Al) with banjo bolt and seals</b>	
2	005 811
3	005 717
4	005 843
5	005 776
6	005 718

## 4/2-way Solenoid Valve for pneumatic systems

### G 1/8", DN3.0 mm

- Compact with integrated flow regulation
- Manual override as standard
- Tube, thread or flange connection
- Seat valve version
- Suitable as a single valve or manifold mounting



Type 5420 is a pilot-controlled 4-way seat valve with servo-diaphragms. A minimum differential pressure of 2.5 bar is needed for switch-over. The valve can be mounted on two-channel manifolds with a common pressure supply.

### Technical data

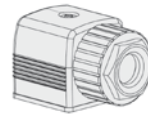
<b>Orifice</b>	DN3.0 mm
<b>Body material</b>	Polyamide
<b>Valve internals</b>	Stainless steel, plastic
<b>Seal material</b>	NBR
<b>Medium</b>	Neutral gases
<b>Media temperature</b>	-10 °C to +60 °C
<b>Ambient temperature</b>	Max. +55 °C
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical Connection</b>	Tag connector acc. to DIN EN 175301-803 (previously DIN 43650) Form A for Cable Plug Type 2508 (not included)
<b>Electrical Power consumption</b>	Inrush AC 11 VA Hold AC 6/2 VA/W, DC 2 W
<b>Type of protection</b>	IP65 (with Cable Plug)
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times 1)</b>	Opening 30 ms Closing 20 ms

<sup>1)</sup> Measurement at the valve outlet, at 6 bar and +20 °C

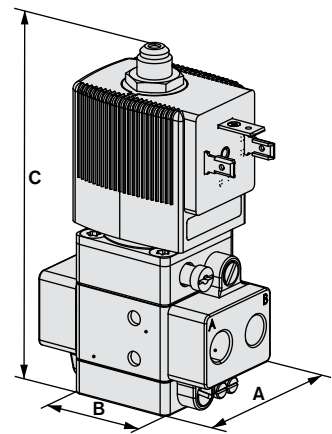
Opening: Pressure rise 0 to 90%,

Closing: Pressure drop 100 to 10%

Dimensions [mm] (see datasheet for further Details)



2508 Cable Plug Form A  
not included



Size	A	B	C
G 1/8"	32	32	101

### Side by side manifold



## Ordering chart

Port connection 1 and 3	Port connection 2 and 4	Orifice [mm]	Qn Value air [l/min]	Pressure range [bar]	Item no. Voltage/Frequency [V/Hz]		
					024/DC	024/50-60	230/50-60
<b>Corrosion-resistant body in polyamide, with 2 W coil, seal material NBR, without cable plug</b>							
<b>Circuit function G - 4/2-way valve</b>							
G 1/8"	G 1/8"	3	200	2.5 - 10	134 622	134 623	134 625
Hose fitting 6/4 mm	Hose fitting 6/4 mm	3	200	2.5 - 10	134 630	134 631	134 633
Flange for manifold	G 1/8"	3	200	2.5 - 10	134 634	134 635	134 637
Flange for manifold	Hose fitting 6/4 mm	3	200	2.5 - 10	134 638	134 639	134 641

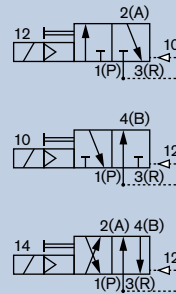
## Accessories

No. of valve places	Item no.
<b>Expandable manifolds from light metal (aluminium)</b>	
2 valves	005 356
3 valves	005 357
4 valves	005 372
5 valves	005 373
6 valves	005 374
8 valves	006 553

Accessories for manifold	Item no.
Blanking plug for unused ports 1 or 4	005 390
Covering plate, complete, for unused valve positions on the manifolds	005 432
Connector nipple with O-ring for connecting manifold	005 049

## 3/2 and 4/2-way Solenoid Valve for pneumatic systems, single valve design

- Compact design
- Reduced power consumption
- Various pneumatic connections available
- With manual override
- Extreme switching reliability



Type 5470 E is available as a 3/2 and 4/2-way valve. The valves can be used as single valves in various application cases. Numerous pipe connection variants exist. The valves are generally equipped with a DC coil. When using an AC power source, use an appliance with a rectifier.

### Power consumption

Corresponds to the effective coil power in the Ordering Table.

### Technical Data

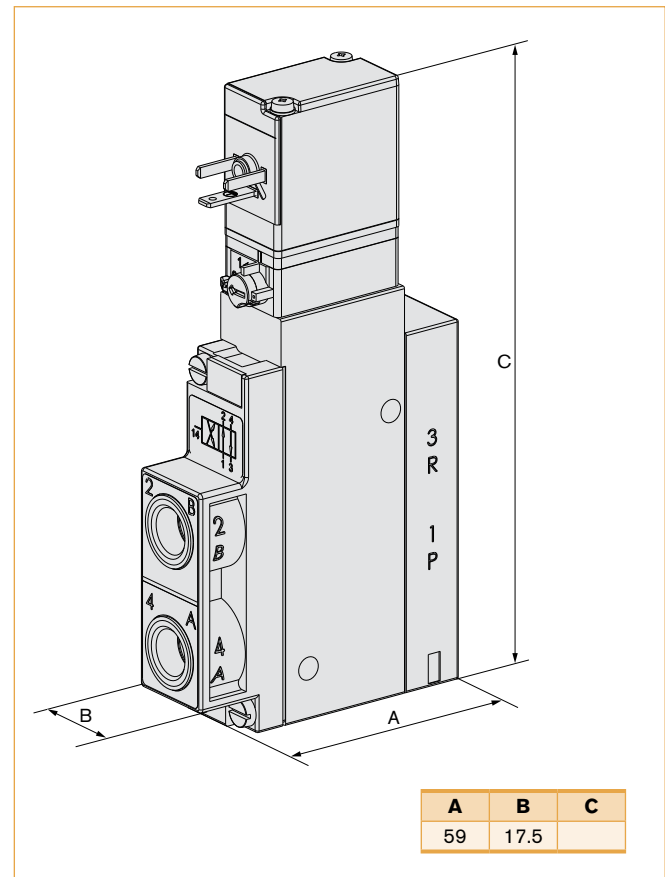
<b>Orifice</b>	DN4.0 mm
<b>Body material</b>	Polyamide (PA)
<b>Valve internals</b>	Ultramide
<b>Seal material</b>	NBR
<b>Media</b>	Compressed air, neutral gases
<b>Media temperature</b>	-10 °C to + 50 °C
<b>Ambient temperature</b>	-10 °C to + 55 °C
<b>Port connection</b>	G 1/8"
<b>1 to 4 (versions)</b>	Tube connection SL 6/4 mm (on request) Push-in connection Ø 6 mm NPT 1/8" (on request)
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 (previously DIN 43650) for cable plug, Form C (not included)
<b>Protection class</b>	IP65 with cable plug
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times <sup>1)</sup></b>	
DC Opening	15 ms
DC Closing	12 ms
AC Opening	15 ms (with cable plug rectifier)
AC Closing	20 ms (with cable plug rectifier)

<sup>1)</sup> Measured at valve outlet with air at 6 bar and +20 °C  
Opening: Pressure rise 0 to 90%, Closing: pressure fall 100 to 10%

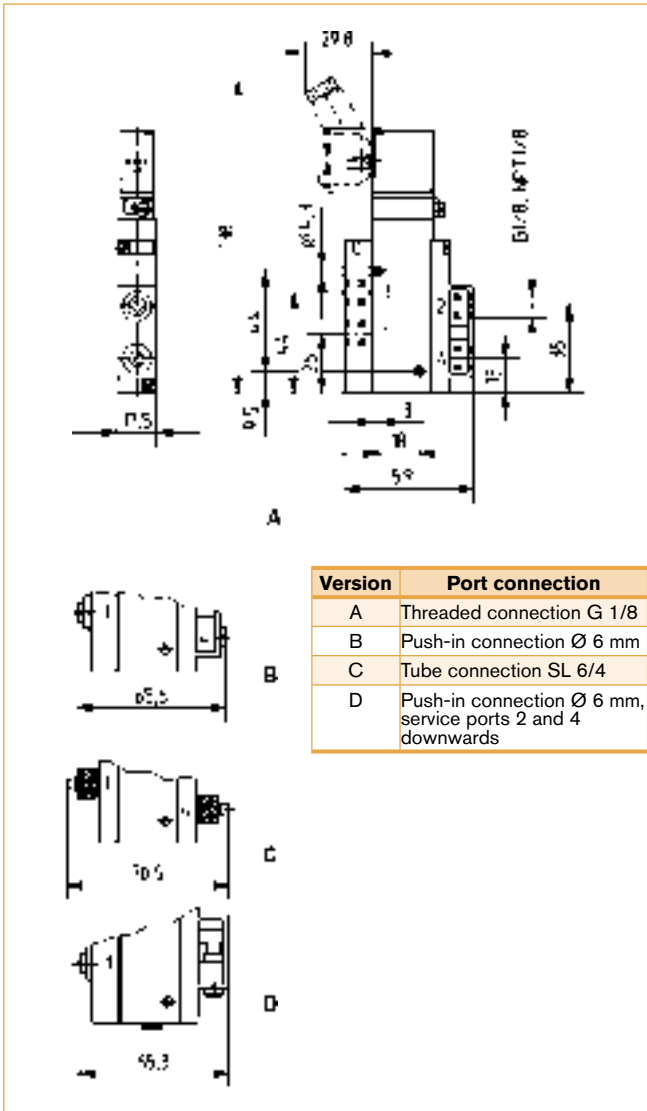
### Options

- Type of protection: Explosion protection Ex i
- Without manual override

### Envelope Dimensions [mm]



### Envelope Dimensions [mm]



### Ordering Chart

Circuit function	Port connection 1 and 3 as well as service ports 2 and 4 (see drawing for the versions)	Orifice [mm]	Q <sub>Nn</sub> -value air [l/min]	Pressure range [bar]	Voltage/frequency [V/Hz]	Power consumption [W]	Item no.
<b>Single valves with different port connections, tag connector on the side, seal material NBR, without cable plug</b>							
C 3/2-way valve normally closed	Push-in connection $\varnothing$ 6 mm (Option B)	4.0	300	2 – 10	024/DC <sup>1)</sup>	2	136 755
	Service port 2 and 4 underneath (Option D)				220 – 240/DC <sup>1)</sup>	3	136 757
D 3/2-way valve normally open	Push-in connection $\varnothing$ 6 mm (Option B)	4.0	300	2 – 10	024/DC <sup>1)</sup>	2	136 758
	Service port 2 and 4 below (Option D)				220 – 240/DC <sup>1)</sup>	3	136 760
G 4/2-way valve	G 1/8" (Option A)	4.0	300	2 – 10	024/DC <sup>1)</sup>	2	136 749
					220 – 240/DC <sup>1)</sup>	3	136 751
	Push-in connection $\varnothing$ 6 mm (Option B)	024/DC <sup>1)</sup>	2	136 752			
		220 – 240/DC <sup>1)</sup>	3	136 754			

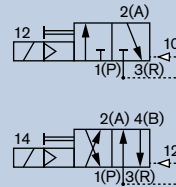
<sup>1)</sup> When using an AC power source, use an appliance with a rectifier.

**Note** - Cable plug must be ordered separately.



## 3/2 and 4/2-way Solenoid Valve for pneumatic systems, modular for block mounting

- With manual override
- Extreme switching reliability
- Flexible block compilation
- Reduced power consumption
- Different pneumatic connections available



mounting example

Type 5470 M is available as a 3/2 and 4/2-way valve. Different modes of action are used within a block. The valves are generally equipped with a DC coil. When using an AC power source, use an appliance with a rectifier.

### Power consumption

Corresponds to the effective coil power in the ordering chart.

### Technical Data

<b>Orifice</b>	DN4.0 mm
<b>Body material</b>	Polyamide (PA)
<b>Valve internal</b>	Ultramide
<b>Seal material</b>	NBR
<b>Media</b>	Compressed air, neutral gases
<b>Media temperature</b>	-10 °C to +50 °C
<b>Ambient temperature</b>	-10 °C to +55 °C
<b>Port connection</b>	G 1/8"
<b>1 to 4 (Versions)</b>	Tube connection SL 6/4 mm (on request) Push-in connection Ø 6 mm NPT 1/8" (on request)
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 (previously DIN 43650) for cable plug, Form C (not included)
<b>Protection class</b>	IP65 (with cable plug)
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times <sup>1)</sup></b>	
DC opening	15 ms
DC closing	12 ms
AC opening	15 ms (with rectifier plug)
AC closing	20 ms (with rectifier plug)

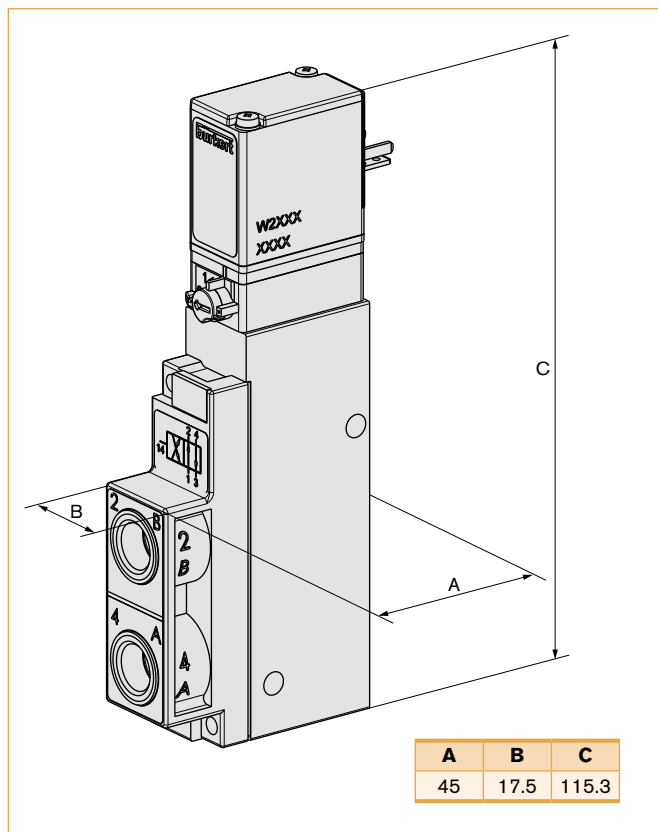
<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C

Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

### Options

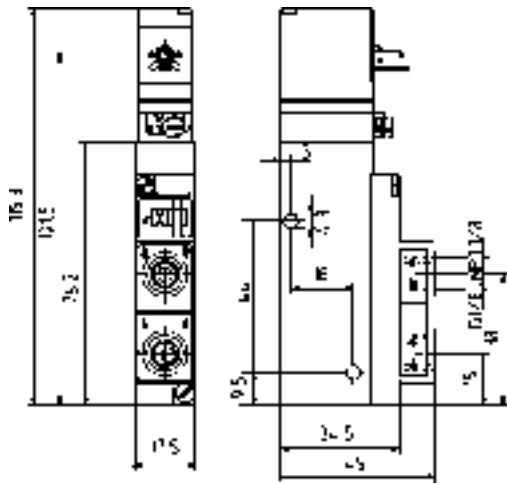
- Type of protection: Explosion protection Ex i
- Without manual override
- Normally open circuit function

### Envelope Dimensions [mm] (see datasheet for details)

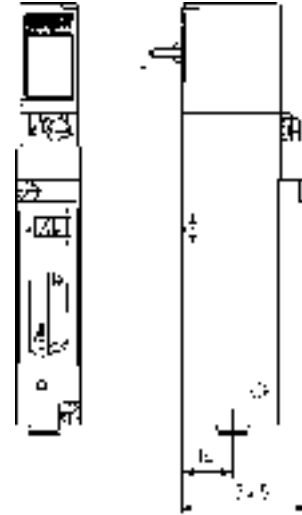


Envelope Dimensions [mm] (see datasheet for details)

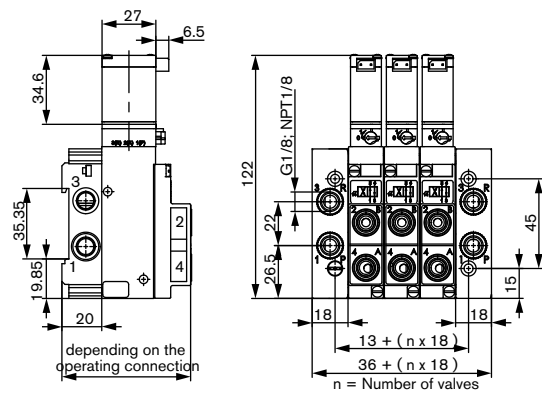
**4/2-way (WWG), tag connector in the front**



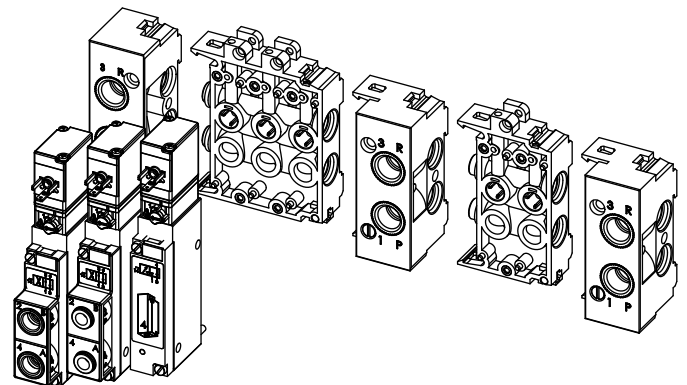
**3/2-way (WWC), tag connector in the back**



**Block** (valve assembly on pneumatic module, Type MP05)



**Block assembly on pneumatic module, Type MP05**



## Ordering Chart

5470 M

Circuit function	Orifice [mm]	Q <sub>Nn</sub> value air [l/min]	Pressure range [bar]	Service ports 4 and 2	Voltage/frequency [V/Hz]	Power consumption [W]	Item no. Tag connector in the rear for valve blocks Type 8640	Item no. Tag connector in the front for valve blocks
C 3/2-way valve normally closed	4.0	300	2 - 8	Push-in connection Ø 6 mm, underneath	024/DC 1)	1	132 479	135 203
			2 - 10		024/DC 1)	2	133 148	135 204
					220 - 240/DC 1)	3	–	132 953
G 4/2-way valve	4.0	300	2 - 8	Push-in connection Ø 6 mm, in front	024/DC 1)	1	–	135 205
			2 - 10		024/DC 1)	2	132 487	135 206
					220 - 240/DC 1)	3	–	132 955
			2 - 8	Push-in connection Ø 6 mm, underneath	024/DC 1)	1	132 489	135 207
			2 - 10		024/DC 1)	2	133 150	135 208
					220 - 240/DC 1)	3	–	132 957
			2 - 8	Threaded port G 1/8", in the front	024/DC 1)	1	–	135 211
			2 - 10		024/DC 1)	2	–	135 212
					220 - 240/DC 1)	3	–	132 959

1) When using an AC power source, use an appliance with a rectifier.

Tag connector at the rear: over the supply ports 1 and 3.

No.	Unit	Item no.
<b>Example for Type 5470 with Type MP05</b>		
1	Connection module right, G 1/8"	133 177
1	Pneumatic basic module, 2 valves	132 516
1	Pneumatic basic module, 3 valves	132 517
1	Connection module left, G 1/8"	133 175
5	Valves	135 203

## Ordering Chart

Version	Item no.
<b>Type MP05 pneumatic modules</b>	
Connection module right, G 1/8"	133 177
Connection module right, NPT 1/8"	133 178
Connection module right, G 1/4"	132 514
Connection module right, NPT 1/4"	132 515
Pneumatic basic module, 2 valves	132 516
Pneumatic basic module, 3 valves	132 517
Pneumatic basic module, 2 valves with check valve	132 518
Pneumatic basic module, 3 valves with check valve	132 519
Connection module left, G 1/8"	133 175
Connection module left, NPT 1/8"	133 176
Connection module left, G 1/4"	132 512
Connection module left, NPT 1/4"	132 513

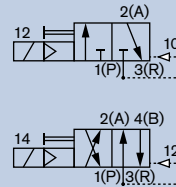
5470 M

## Accessories

Description	Features	Item no.
<b>Type MP05 pneumatic modules</b>		
Connection module G 1/8"	intermediate supply	643 019
Blanking plug	G 1/8"	631 019
Blanking plug	G 1/4"	631 020
Blanking plug for push-in connection	Ø 6 mm	015 397
Pressure rings for push-in connection	Ø 6 mm	015 401
Covering plate (black)	for unused valve positions	643 223
Indicating tags	64 pieces	623 816

## 3/2 and 4/2-way Solenoid Valve for pneumatic systems, for self-connecting block mounting

- Valve discs individually self-connecting
- With manual override
- 3-way version with check valve
- Extreme switching reliability
- Flexible block compilation



Type 5470 R is available as a 3/2 and 4/2-way valve. The valves can be mounted together individually using the module flange. They can be snapped together with the connection modules to form valve blocks.

### Power consumption

Corresponds to the effective coil power in the ordering chart.

### Technical Data

<b>Orifice</b>	DN4.0 mm
<b>Body material</b>	Polyamide (PA)
<b>Valve internal</b>	Ultramide
<b>Seal material</b>	NBR
<b>Media</b>	Compressed air, neutral gases (5 µm filtering)
<b>Media temperature</b>	-10 °C to +50 °C
<b>Ambient temperature</b>	-10 °C to +55 °C
<b>Supply port 1 and 3</b>	Module flange
<b>Service port 2 and 4 (Versions)</b>	Threaded port G 1/8" Tube connection SL 6/4 mm (on request) Push-in connection Ø 6 mm Threaded port NPT 1/8" (on request)
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	100% continuous operation
<b>Electrical connection</b>	Tag connector above acc. to DIN EN 175301-803 (previously DIN 43650) for cable plug, Form C and side by side cable plug Type 1057-SA and rectangular plug (5.08 mm) Type 2505 (not included)
<b>Protection class</b>	IP65 with cable plug IP20 with Type 1057-SA or IP40 with rectangular plug (5.08 mm)
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times <sup>1)</sup></b>	
DC opening	15 ms
DC closing	12 ms
AC opening	15 ms
AC closing	20 ms

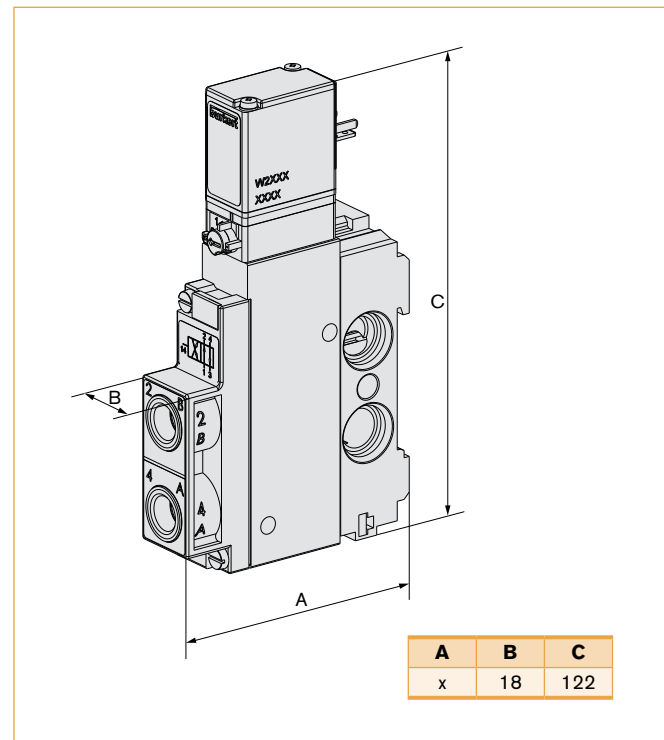
<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C

Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

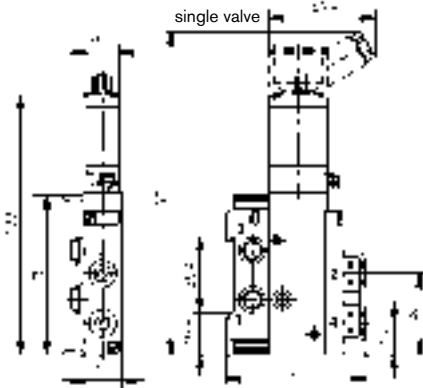
### Options

- Type of protection: Explosion protection Ex i
- Without manual override
- Normally open circuit function

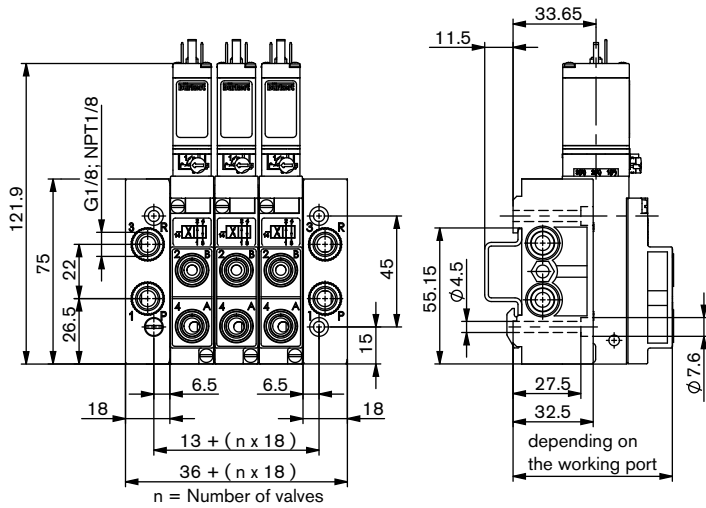
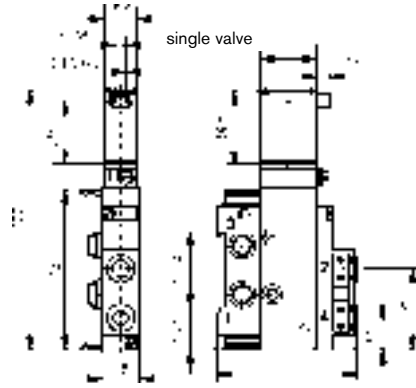
### Envelope Dimensions [mm]



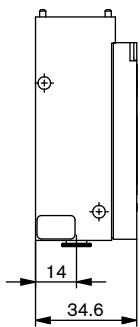
Valve with tag connector above



Valve with rectangular plug on the side

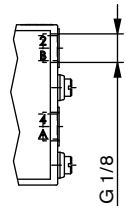


Variation A



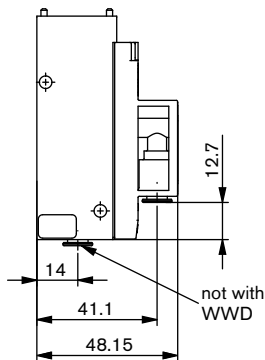
Push-in connection for tube, Ø6 mm below, WWC

Variation B



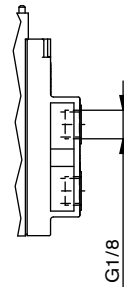
G 1/8" sideways mit restricted feedback valve

Variation C



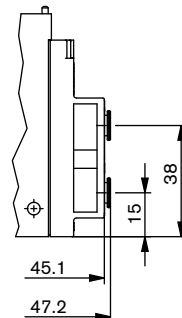
Push-in connection for tube, Ø6 mm below, WWD or G

Variation E



G 1/8" sideways

Variation F



Push-in connection, Ø6 mm sideways

## Ordering Chart

5470 R

Circuit function	Orifice [mm]	Q <sub>Nn</sub> value air [l/min]	Pressure range [bar]	Service port 2 and 4	Voltage/frequency [V/Hz]	Power consumption [W]	Item no. DC coil ■■	Item no. UC coil ■■■
<b>Extendable single valve with module flange for supply ports 1 and 3, tag connector above, supplied without cable plug</b>								
C 3/2-way valve, normally closed ■	4.0	300	2-10	Push-in connection Ø 6 mm below with check valve (Option A)	024/DC/UC	2	136 872	–
					220-240/DC/UC	3	136 874	145 971
G 4/2-way valve	4.0	300	2-10	G 1/8" at side (Option E)	024/DC/UC	2	136 881	–
					220-240/DC/UC	3	136 883	145 980
				G 1/8" at side with one-way flow restrictor (Option B)	024/DC/UC	2	136 884	–
					220-240/DC/UC	3	136 886	145 983
				Push-in connection Ø 6 mm at side (Option F)	024/DC/UC	2	136 887	–
					220-240/DC/UC	3	136 889	145 986
Push-in connection Ø 6 mm underneath (Option C)	024/DC/UC	2	136 890	–				
	220-240/DC/UC	3	136 892	145 989				

■ 3/2-way models with non-return valve in the module flange

■■ Only for direct current operation (DC), for alternating current (AC), place a cable plug with a rectifier upstream

■■■ For universal current operation (UC = DC or AC); rectifier, varistor and LED integrated into the coil

Circuit function	Orifice [mm]	Q <sub>Nn</sub> value air [l/min]	Pressure range [bar]	Service port 2 and 4	Voltage/frequency [V/Hz]	Power consumption [W]	Item no. DC coil
<b>Extendable single valves with module flange for supply ports 1 and 3, with rectangular plug</b>							
C 3/2-way valve, normally closed	4.0	300	2-10	Push-in connection Ø 6 mm under with RSV (Option A) ■	024/DC	2	145 993
G 4/2-way valve	4.0	300	2-10	G 1/8" with 1-way restrictor valve (Option B)	024/DC	2	145 997
				Push-in connection Ø 6 mm on side (Option F)	024/DC	2	145 998
				Push-in connection Ø 6 mm underneath (Option C)	024/DC	2	145 999

■ RSV = non-return valve

## Accessories

Version	Port connection	Item no. DC coil
<b>Connector modules and accessories for valve blocks</b>		
Connector module, left	G 1/8"	133 175
	G 1/4"	132 512
	Push-in connection Ø 8 mm	623 755
	Push-in connection Ø 10 mm	623 762
Connector module, right	G 1/8"	133 177
	G 1/4"	132 514
	Push-in connection Ø 8 mm	623 770
	Push-in connection Ø 10 mm	623 784
Intermediate supply	G 1/8"	627 742
	G 1/4"	631 288
	Push-in connection Ø 8 mm	631 287
	Push-in connection Ø 10 mm	631 290
Blanking plug	G 1/8"	631 019
	G 1/4"	631 020
Blanking plug	Ø 6 mm	015 397
	Ø 8 mm	900 065
Covering plate	for unused valve positions	643 223

5470 R

Version	Item no. DC coil
<b>Additional accessories</b>	
Extendable cable plug Type 1057-SA, IP20, with looped-through neutral and protective conductor (only for 24 V)	647 357
Protective conductor and neutral cable kit	629 262
Control line with AMP plug, 540 mm wires	629 181
Rectangular connector, matrix 5.08 mm, with 3 m cable	133 486
Rectangular connector, matrix 5.08 mm, with 300 mm wires	644 068
Rectangular connector, matrix 5.08 mm, with 2 single contacts	644 067
Standard 300 mm rail for 8-12-way block with intermediate supply (IS) or for 8-14-way block without IS	640 789
Standard 498 mm rail for 17-22 block with 2 intermediate supply (IS) or for 18-23 block with 1 IS	630 579

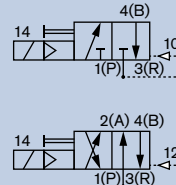
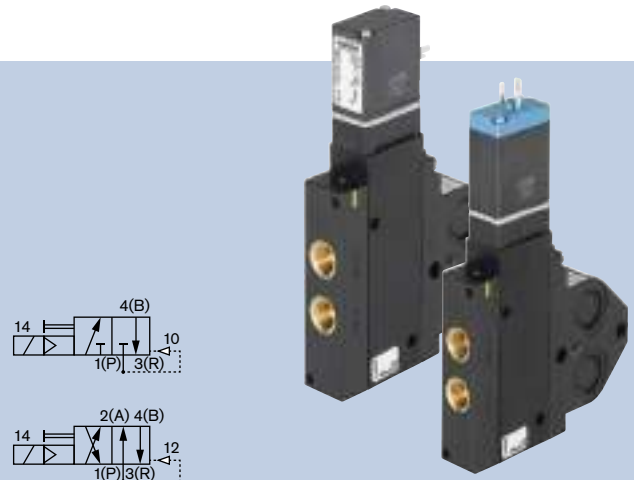


## 3/2- and 4/2-way NAMUR Solenoid Valve for pneumatic

5470 NAMUR  
5470 NAMUR Ex i

### DN4 mm

- Extreme switching reliability
- Plastic version
- Reduced power consumption
- With manual override



The NAMUR solenoid valves, Type 5470 NAMUR and Type 5470 NAMUR Ex i, are equipped with a NAMUR standard flange for easy direct mounting on process actuator. The devices of this series are made from high quality plastics.

### Technical data

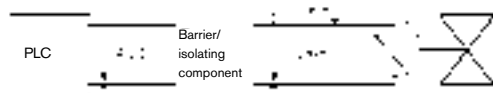
<b>Pressure range</b>	2-10 bar Standard, 2-8 bar Ex i
<b>Media temperature</b>	-10 °C to +50 °C
<b>Ambient temperature</b>	+55 °C max.
<b>Body material</b>	Polyamide
<b>Connections</b>	G 1/4" (Brass nickel-plated for Connection 1 and 3)
<b>Orifice</b>	4 mm
<b>Seal material</b>	NBR
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector according to DIN EN 175301 (previously DIN 43650) for cable plug Form C (not included)
<b>Type of protection</b>	IP65 (NEMA 4) with Cable Plug
<b>Response times <sup>1)</sup></b>	
Standard	Opening 50 ms, Closing 12 ms
Ex i	Opening 60 ms, Closing 50 ms

<sup>1)</sup> Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.

Opening: Pressure rise 0 to 90%,  
Closing: Pressure drop 100 to 10%

### Note

The units may only be used in explosive atmospheres in the manner approved by the Federal Institute of Physics and Technology (PTB), i.e., the permissible maximum electrical values must be complied with. Suitable barriers and isolating modules are available for this.

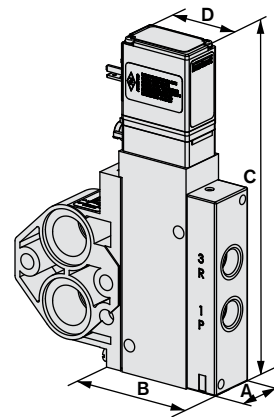


The valve is intended for operation on 24V DC outputs via the intermediate switching of a corresponding intrinsically-safe operating resource (isolating module or barrier). If required, request the "Recommended Barrier and Isolating Module" data sheet.

### Options

- Without manual override
- SIL certificate

Dimensions [mm] (see datasheet for further Details)



Size	A	B	C	D
G 1/4"	18	55	115.3	37

### Electrical data - coil AC10 Ex i

<b>Type of protection</b>	II 2G Ex ia IIC T6 PTB 01 ATEX 2175	
<b>Functional values for valve switching function</b>	<b>at +20 °C</b>	<b>at +55 °C</b>
Minimum switching current	29 mA	29 mA
Nominal resistance of the coil	320 Ω	360 Ω
Minimum terminal voltage	9.3 V	10.4 V
<b>Permissible maximum values acc. to certificate of conformity</b>		
U <sub>i</sub>	35 V	
I <sub>i</sub>	0.9 A	
P <sub>i</sub> /T <sub>umg. max.</sub>	0.9 W/+55 °C	

## Ordering chart

Orifice [mm]	QNn Value air [l/min]	Pressure [bar]	Port connection	Item no.			Ex i
				024/DC [2 W]	110-120/DC [3 W]	220-240/DC [3 W]	
<b>3/2-way with NAMUR flange, WWC (pilot operated, output 4 normally vented, output 2 recirculated)</b>							
4.0	300	2 - 10 (at Ex i 2 - 8)	G 1/8" (Connections 1 and 3)	136 761	136 762	136 763	139 224
			Push-in connection Ø 6 mm (Connections 1 and 3)	136 764	–	136 766	139 402
<b>4/2-way with NAMUR flange, WWG (pilot operated, output 4 normally pressurized, output 2 vented)</b>							
4.0	300	2 - 10 (at Ex i 2 - 8)	G 1/8" (Connections 1 and 3)	136 767	136 768	136 769	139 407
			Push-in connection Ø 6 mm (Connections 1 and 3)	136 770	136 771	136 772	139 408
			G 1/8" (Connections 1 and 3), NAMUR flange with one-way flow restrictor (Connections 2 and 4)	136 773	136 774	136 775	–

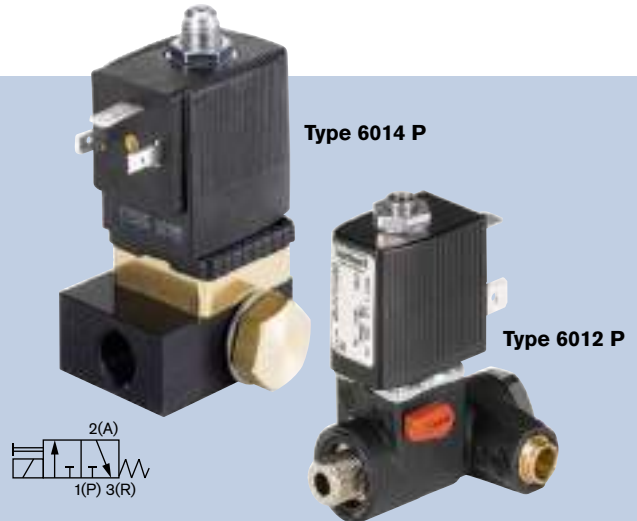
5470 NAMUR  
5470 NAMUR Ex i

# Direct mounting pilot valve for pneumatic actuators

6012 / 6014 Pilot

## G 1/8" or G 1/4"

- Simple to connect to valve and air supply
- Low power
- Tough and reliable
- Manual override as standard



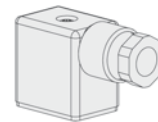
Direct-acting, 3/2-way, normally closed solenoid valve is plunger operated and designed to fit simply and securely to process valves. Type 6012 P has a compact design and a 1.2 mm orifice. Type 6014 P with a higher air capacity because of the 2 mm orifice.

### Technical Data

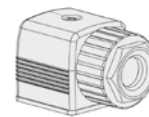
	6012 P	6014 P
<b>Pressure range</b>	0-10 bar max.	0-10 bar max.
<b>Temperature media</b>	-10 °C to +60 °C	-10 °C to +60 °C
<b>Ambient temperature</b>	-10 °C to +40 °C	-10 °C to +40 °C
<b>Body material</b>	Polyamide	Brass and aluminium
<b>Banjo bolt material</b>	Brass, nickel plated	Brass, nickel plated
<b>Seal material</b>	Banjo screw: NBR Valve: FKM	FKM
<b>Coil material</b>	Epoxy (Class H)	Polyamide
<b>Voltage tolerance</b>	± 10%	± 10%
<b>Power consumption</b>	DC: 4 W, AC: 9 VA (inrush), 6 VA (hold)	DC: 8 W, AC: 24 VA (inrush), 17 VA (hold)
<b>Protection class</b>	IP65 (with cable plug)	IP65, NEMA 4 (with cable plug)
<b>Electrical connection</b>	Cable plug, Type 2507, Form B acc. to industry standard (not included)	Cable plug, Type 2508, Form A acc. to DIN EN 175301-803 (not included)
<b>Response times <sup>1)</sup></b>		
DC opening	7-12 ms	ca. 18 ms
DC closing	7-12 ms	ca. 22 ms
AC opening	7-10 ms	ca. 18 ms
AC closing	9-12 ms	ca. 22 ms

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C  
Opening: pressure rise 0 to 90%, closing: pressure drop 100 to 10%

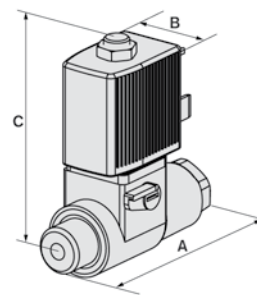
### Envelope Dimensions [mm] (see datasheet for details)



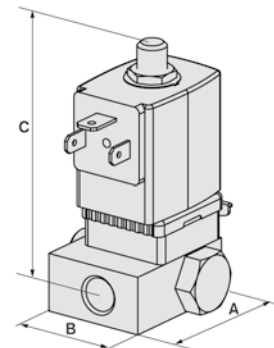
2507 cable plug  
Form B  
(not included)



2508 cable plug  
Form A  
(not included)



Type 6012 P



Type 6014 P

Type	A	B	C
6012 P	47	20	52
6014 P	45	36	79

### Options

#### 6012 P

- Normally open
- Cable plug with LED and varistor
- Other voltages on request

#### 6014 P

- Normally open
- Cable plug with LED and varistor
- Hazardous area approvals

## Ordering Charts

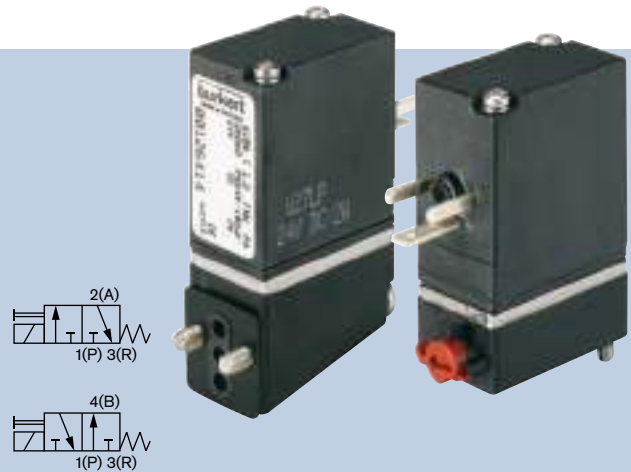
Circuit function	Port (P)	Port (A) [inch]	Orifice [mm]	QNn [l/min]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
<b>Type 6012 P</b>								
C Normally closed 3 way configuration	6 mm tube	G 1/8	1.2	48	0 - 10	552 287	552 288	552 290
	6 mm tube	G 1/4	1.2	48	0 - 10	552 283	552 284	552 286
	G 1/8"	G 1/8	1.2	48	0 - 10	552 299	552 300	552 302
	G 1/4"	G 1/8	1.2	48	0 - 10	552 295	552 296	552 298
	G 1/4"	G 1/4	1.2	48	0 - 10	552 291	552 292	552 294

Circuit function	Port (P) [inch]	Port (A) [inch]	Orifice [mm]	QNn [l/min]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
<b>Type 6014 P</b>								
C Normally closed, 3 way configuration	G 1/4	G 1/4	2	120	0 - 10	424 103	424 104	424 107

## 3/2-way Solenoid Valve for pneumatic systems

6106

- Direct-acting
- High cycling rate
- Reduced power consumption
- With manual override
- CNOMO and Bürkert flange interface



The direct-acting rocker solenoid valve, Type 6106, is especially designed for neutral gaseous mediums.

The valves are generally equipped with a DC coil. When using an AC power source, use an appliance with A rectifier.

The heat input in the medium is minimal, because the housing is separated from the coil by a stainless steel plate.

The valves can be mounted directly or also single or manifold mounted. They are used for dosing, filling, mixing and distributing small quantities of medium.

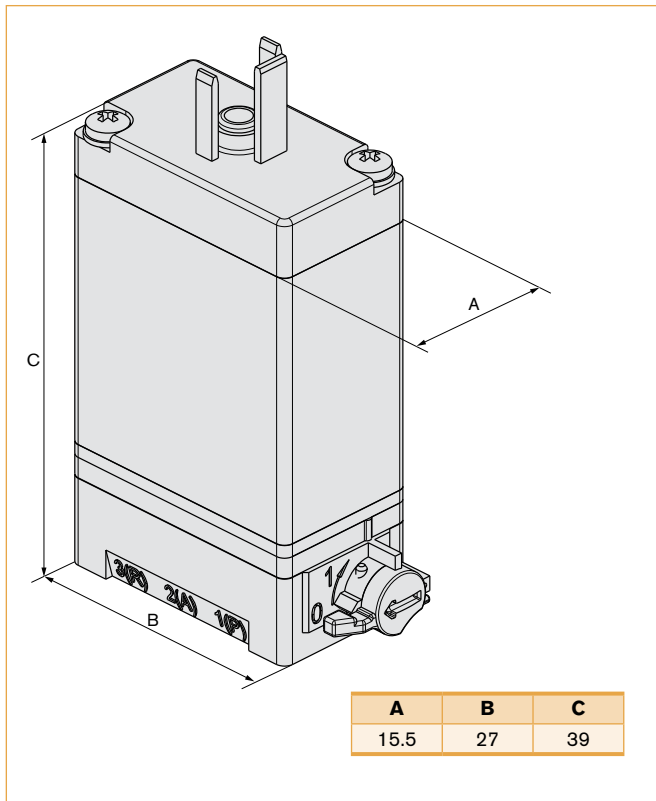
### Technical Data

<b>Orifice</b>	DN0.9 and DN1.2 mm, other on request
<b>Body material</b>	PA (polyamide)
<b>Seal material</b>	FKM
<b>Media</b>	Compressed air, neutral gases (5 µm filtering) technical vacuum
<b>Media temperature</b>	-10 °C to +55 °C
<b>Ambient temperature</b>	-10 °C to +55 °C
<b>Port connection</b>	Bürkert flange below, CNOMO flange sideways
<b>Operating voltages</b>	220-240 V DC, 24 V DC, other voltages on request
<b>Voltage tolerance</b>	±10%
<b>Power consumption</b>	see ordering chart
<b>Cycling rate</b>	Approx. 1000/min
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector sideways acc. to DIN EN 175301-803 (previously DIN 43650) for cable plug, Form C, other options on request (not included)
<b>Protection class</b>	IP20 with tag connector, IP65 with cable plug
<b>Installation</b>	As required, preferably with actuator upwards
<b>Response times</b>	acc. ISO 12238:2001; Measured at valve outlet at 6.3 bar and + 20 °C
Opening	Approx. 25 ms (pressure rise 0 to 10%)
Closing	Approx. 25 ms (pressure drop 100% to 10%)

<sup>1)</sup> Measured at valve outlet at 6.3 bar and + 20 °C

Opening: pressure rise 0 to 90%, Closing: pressure drop 100 to 10%

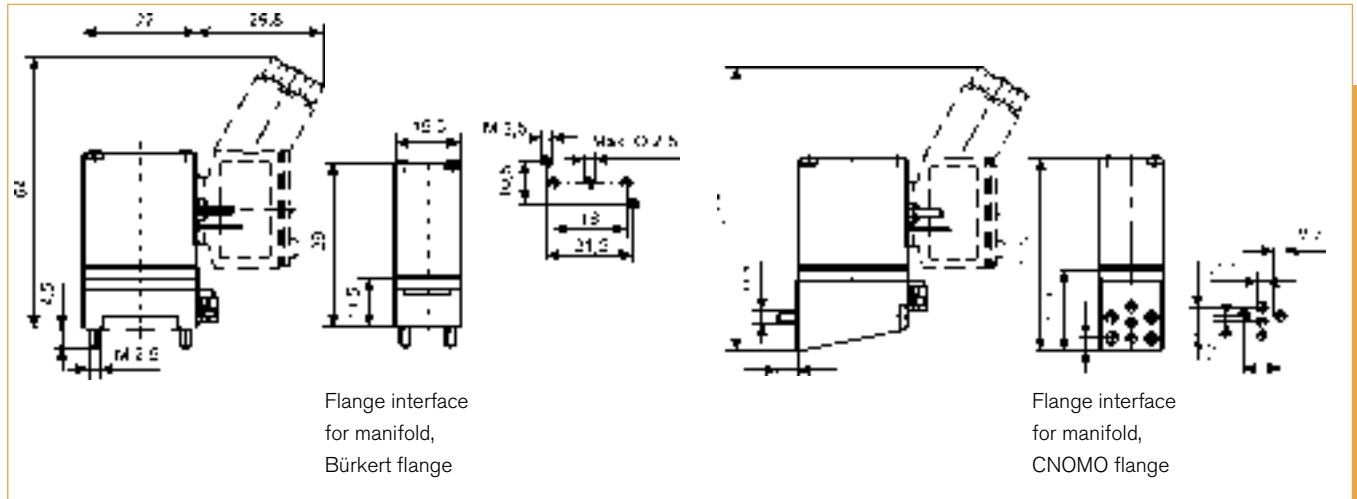
### Envelope Dimensions [mm]



### Options

- ATEX, UL/CSA approvals
- Available without manual override

## Envelope Dimensions [mm]



## Ordering Chart

Circuit function	Port connection	Orifice [mm]	Q <sub>Nn</sub> value air 1 → 2 [l/min]	Q <sub>Nn</sub> value air 2 → 3 [l/min]	Pressure range [bar]	Circuit function	Power consumption [W]	Item no. per voltage/frequency [V/Hz]	
								024/DC <sup>1)</sup>	220-240/DC <sup>1)</sup>
<b>All valves with manual override, tag connector sideways, mounting screws and flange seal, without cable plug</b>									
C 3/2-way valve normally closed	Bürkert	0.9	22	25	Vac.- 8	monostable	1	126 417	–
	Bürkert	1.2	40	47	Vac.-10		2	126 411	–
							3	–	126 413
D 3/2-way valve normally open	Bürkert	0.9	22	25	Vac.- 8	1	126 421	–	
	Bürkert	1.2	40	47	Vac.-10	2	126 419	–	
C 3/2-way valve normally closed	CNOMO	0.9	22	25	Vac.- 8	1	126 418	–	
		1.2	33	38	Vac.-10	2	126 414	–	
						3	–	126 416	
D 3/2-way valve normally open	CNOMO	0.9	22	25	Vac.- 8	1	126 422	–	
		1.2	33	38	Vac.-10	2	126 420	–	

<sup>1)</sup> When using an AC power source, use an appliance with a rectifier.

Unit	Features	Item no.
<b>Single manifolds from aluminium, black anodised</b>		
Single manifold	for Bürkert flange, 16 mm width, M5	623 873
	for Bürkert flange, 16 mm width, G 1/8"	634 917
	for Cnomo flange, 16 mm width, M5	639 885
Single module with plug-in coupling	for single or series connection of valves with Bürkert flange	643 566
Complete mounting kit	for standard rail TS 35 x 7.5 mm	629 254
Blanking plate kit	for unused valve positions on Bürkert plates	629 327
	for unused valve positions on Cnomo plates	639 695
Banjo coupler with banjo bolts	G 1/8, with tube hose connector Ø 6 mm, for pilot valve	781 126
	G 1/4, with tube hose connector Ø 6 mm, for pilot valve	781 735

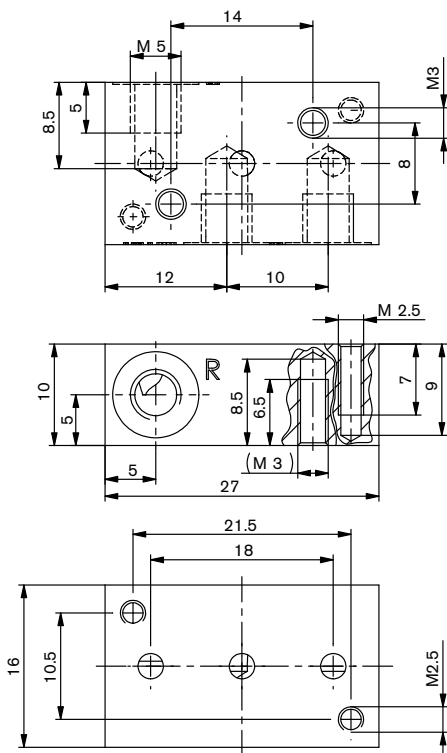
Accessories

No. of valve modules	Dimensions A [mm]	Dimensions B [mm]	Item no. G 1/8" and M5	Length L [mm]	Item no. G 1/8" and M5
<b>Multiple manifolds made from aluminium</b>					
	<b>Bürkert flange, width/station 18 mm</b>			<b>CNOMO flange, width/station 16.5 mm</b>	
2	60	18	658 695	33	639 887
3	78	36	658 696	49.5	639 862
4	96	54	658 697	66	639 863
5	114	72	658 698	82.5	639 864
6	132	90	658 699	99	639 865
8	168	126	658 700	132	639 866
10	204	162	658 701	165	639 867
12	240	198	658 703	198	639 868

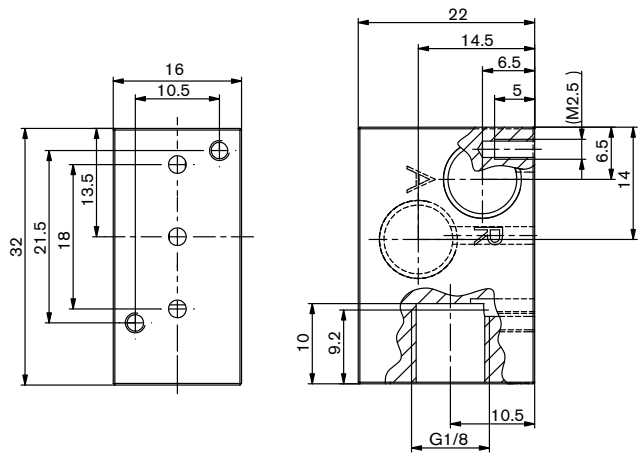
6106

Dimensions single manifolds for Bürkert flange [mm]

Manifold in aluminium,  
black anodised, port connection M5

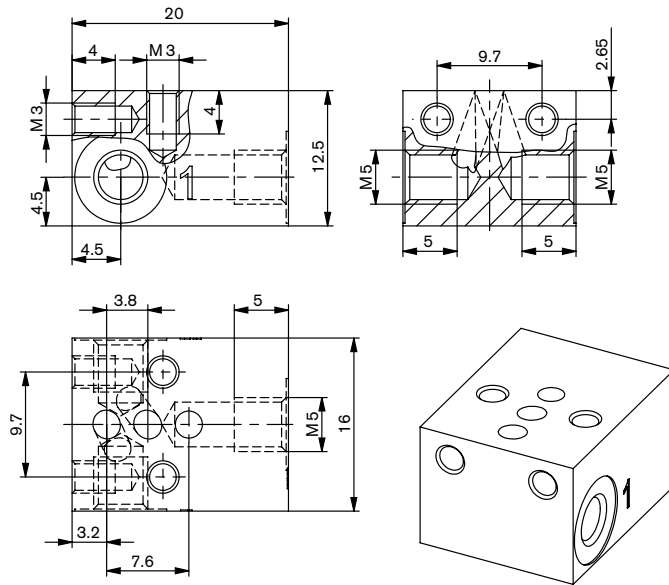


Manifold in aluminium,  
black anodised, port connection G 1/8

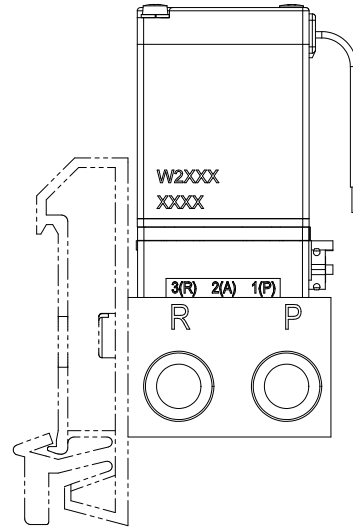


Dimensions single manifolds for CNOMO flange [mm]

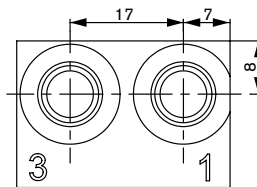
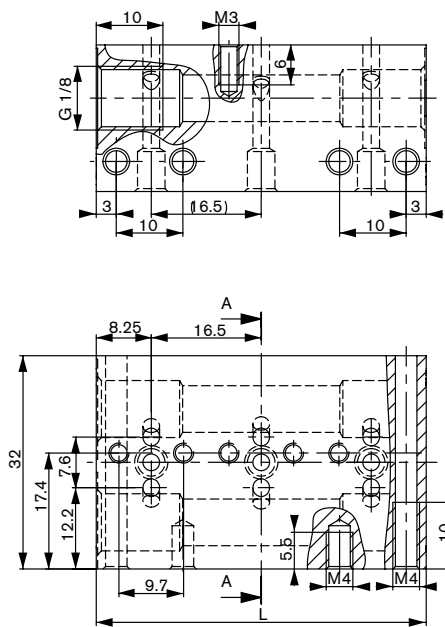
Manifold for CNOMO flange,  
black anodised, port connection M5



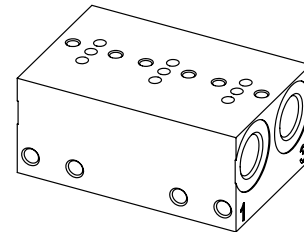
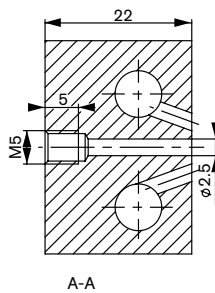
Mounting kit, complete for standard rail  
TS35 x 7.5 mm



Dimensions multiple manifolds CNOMO flange 3-way [mm]



Manifold in aluminium, black anodised,  
port connection G 1/8 and M5



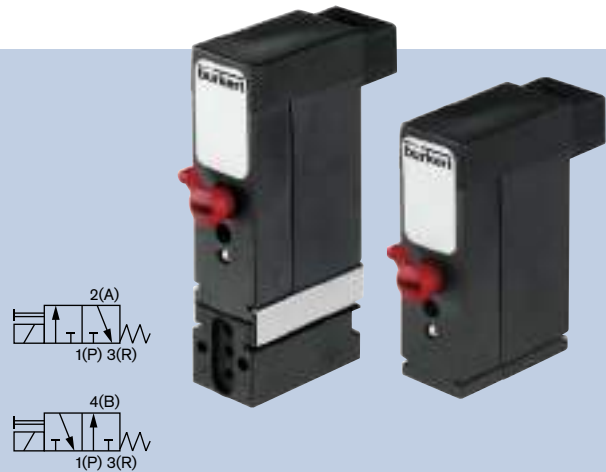
Manifold	L
2-way	33
3-way	49.5
4-way	66
5-way	82.5
6-way	99
8-way	132
10-way	165
12-way	198
Blanking plate kit	for non-configured valve positions



## 3/2-way Flipper Solenoid Valve for gases and liquids

6144

- Separated medium
- 10 mm width per station
- Direct-acting
- Low power consumption
- Sub-base connection
- With manual override



In addition to its exceptional performance characteristics, the flipper principle of Type 6144 is especially marked by its very low switching noise and its low wear level. Furthermore, integrated medium separation enables use above and beyond pneumatic applications. Depending on the case of operation, various flange connections are available that are suitable for both individual and block mounting.

Installation advice: The valve must have a minimum distance of 5 mm from other ferromagnetic materials in order to avoid malfunctioning during operating conditions.

### Technical Data

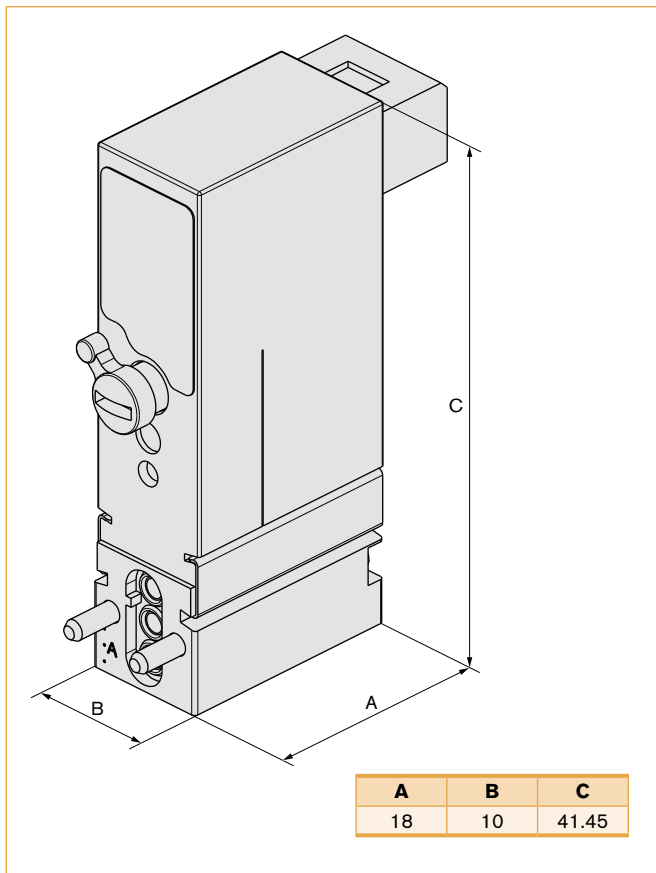
<b>Body material</b>	PPS (Polyphenylensulfide)
<b>Seal material</b>	FKM
<b>Media</b>	Compressed air lubricated, oil-free or dry; neutral gases and liquids (5 µm filtering); technical vacuum
<b>Media temperature</b>	0 °C to +55 °C
<b>Ambient temperature</b>	0 °C to +55 °C
<b>Port connection</b>	<ul style="list-style-type: none"> <li>• Bürkert flange</li> <li>• Lateral flange</li> </ul>
<b>Electrical connection</b>	Rectangular plug as standard on request: <ul style="list-style-type: none"> <li>• Circular plug M8x1</li> <li>• Flying lead 0.2 mm<sup>2</sup>, 300 mm</li> <li>• Blank connector (5.08 mm)</li> </ul>
<b>Operating voltage</b>	24 V DC <sup>1)</sup> Further voltages on request
<b>Voltage tolerance</b>	±10% <sup>2)</sup>
<b>Nominal power</b>	0.8 W
<b>Switching function</b>	Monostable Bistable (impulse) on request
<b>Duty cycle</b>	100% continuous rating
<b>Installation</b>	As required, preferably with actuator upright; 5 mm minimum distance to ferromagnetic materials
<b>Insulation class</b>	3 acc. VDE 0580
<b>Protection class</b>	IP40
<b>Cycling rate</b>	ca. 1000/min
<b>Electrical control</b>	with SPS possible
<b>Response times <sup>3)</sup></b>	
Open	ca. 8 ms (Standard)
Close	ca. 10 ms (Standard)

<sup>1)</sup> Battery voltage; observe polarity as shown on top of the valve

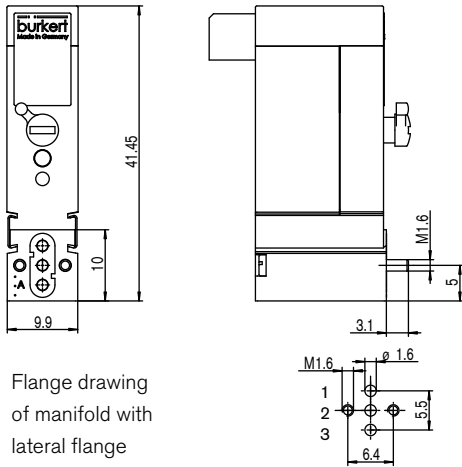
<sup>2)</sup> Max. residual ripple allowed

<sup>3)</sup> Measured at valve outlet at 6 bar and +20 °C acc. to DIN ISO 12238  
Opening: pressure rise 0 to 10%, closing: pressure drop 100 to 10%

### Envelope Dimensions [mm]

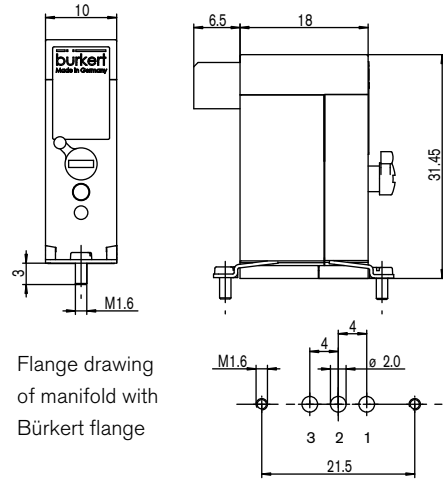


**Type 6144 with lateral flange**



Flange drawing of manifold with lateral flange

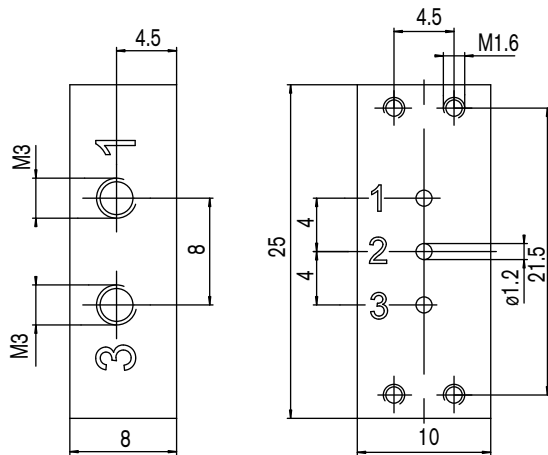
**Type 6144 with Bürkert flange**



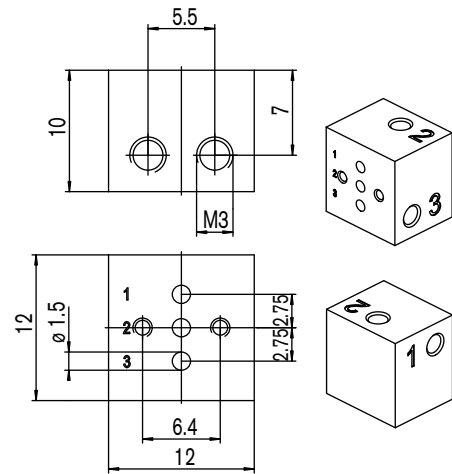
Flange drawing of manifold with Bürkert flange

The valve can optionally be delivered with manual override on the left or right hand side (standard: opposite the electrical connection).

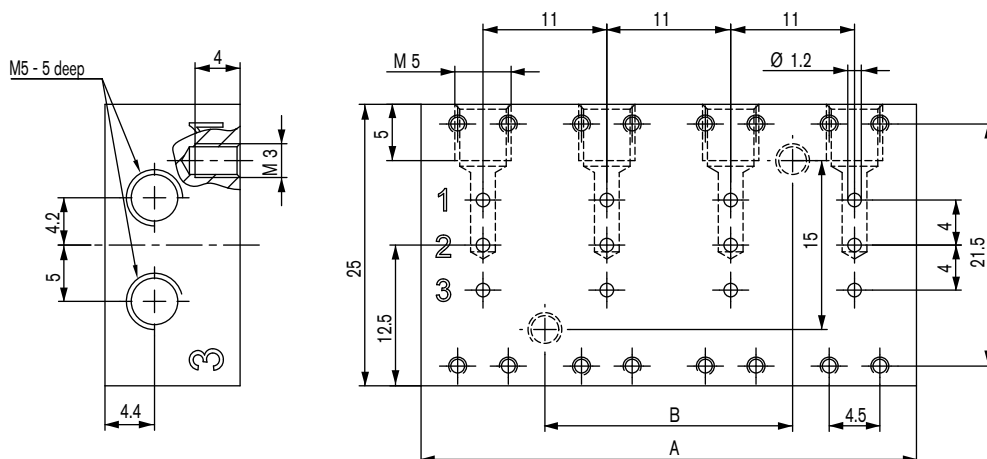
**Single manifold for Bürkert flange**  
Material: Aluminium, M3 threaded



**Single manifold for lateral flange**  
Material: Aluminium, M3 threaded

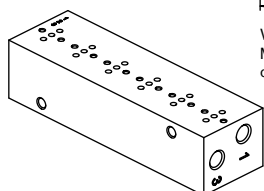
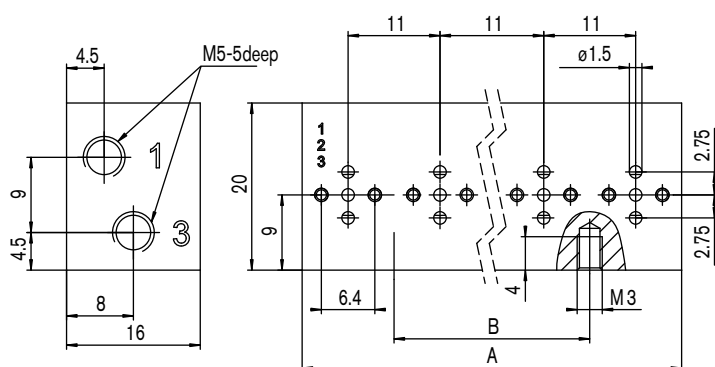


**Multiple manifolds for Bürkert flange, Material: Aluminium, M5 threaded**



	A	B
2 valves	22	-
4 valves	44	22
6 valves	66	44

**Multiple manifolds for lateral flange, Material: Aluminium, M5 threaded**



Working ports  
M5-5 deep  
on plate bottom

	A	B
2 valves	22	-
4 valves	44	22
6 valves	66	44
8 valves	88	66

## Ordering Chart

Circuit function	Port connection	Orifice [mm]	Qn value 1-2 air [l/min] <sup>1)</sup>	Qn value 2-3 air [l/min] <sup>1)</sup>	Pressure range [bar] <sup>2)</sup>	Manual override	Voltage [V]	Nominal power [W]	Item no.
<b>All valves with rectangular plug, mounting screws and flange seal; without plug connection</b>									
C 3/2-way valve normally closed	Bürkert flange	0.6	7.0	8.5	0 - 10 <sup>3)</sup>	with	24	0.8	181 367
	lateral flange		6.0	7.5					175 682
D 3/2-way valve normally open	Bürkert flange	0.6	7.0	8.5	0 - 10	with	24	0.8	175 653
	lateral flange		6.0	7.5					179 098

<sup>1)</sup> Qn- value air [l/min]: Measurement with +20°C, 6 bar pressure on the valve input and 1 bar pressure differential

<sup>2)</sup> Pressure values [bar]: Measured as overpressure to the atmospheric pressure

<sup>3)</sup> Vacuum up to 10 bar on request

Fixing screws for Bürkert flange: M1.6x5, for lateral flange: M1.6x20

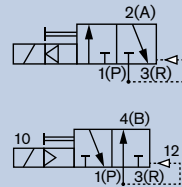
## Accessories

Unit	Characteristics	Item no.
<b>Manifolds</b>		
Single manifold	for Bürkert flange, M3	639 873
Single manifold	for lateral flange, M3	639 234
Manifold 2-fold	for Bürkert flange, M5	641 911
Manifold 4-fold	for Bürkert flange, M5	641 912
Manifold 6-fold	for Bürkert flange, M5	639 874
Blanking plate kit	for multiple manifolds, Bürkert flange	645 512
Manifold 2 valves	for lateral flange, M5	641 915
Manifold 4 valves	for lateral flange, M5	641 916
Manifold 6 valves	for lateral flange, M5	639 235
Manifold 8 valves	for lateral flange, M5	672 676
Blanking plate set	for multiple manifolds angle flange	645 513
Push-in fitting	Brass, straight, M3, for 4/2 mm tube	782 534
Push-in fitting	Brass, straight, M5, for 4/2 mm tube	787 810
Rectangular cable plug	with 3 m cable	133 486
Rectangular cable plug	with 300 mm flying leads	644 068
Rectangular cable plug	with 2 single contacts	644 067

## 3/2-way Solenoid Valve for pneumatics

6518

- High flow-rate capacity
- Single or manifold mounting
- Circuit function NC and NO
- Push-over solenoid coil
- Reduced power consumption
- With manual override



Type 6518 is a pilot operated 3/2-way valve. The use of high quality materials allows the valves to be used even in outdoor and chemical environments. The valve can be used individually or in blocks.

### Technical Data

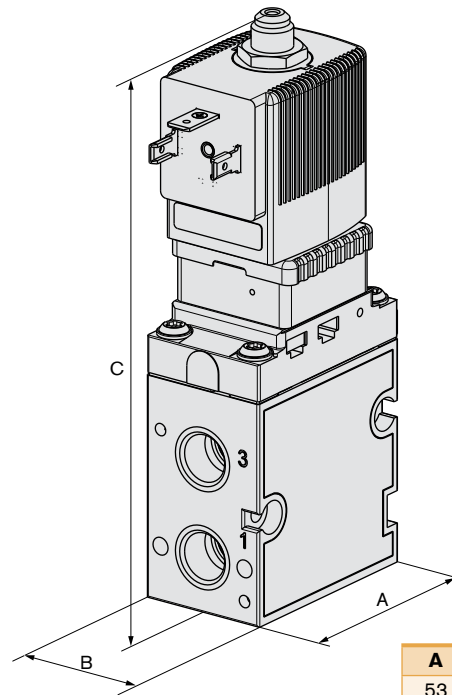
<b>Orifice</b>	DN8.0 mm
<b>Body material</b>	Polyamide, reinforced
<b>Thread insert material</b>	Brass (stainless steel on request)
<b>Seal material</b>	NBR and PUR
<b>Medium</b>	Compressed air, neutral gases
<b>Mediums temperature</b>	-10 °C to +50 °C
<b>Ambient temperature</b>	-25 °C to +55 °C
<b>Supply ports</b>	1 and 3 Threaded port G 1/4", can also be flanged
<b>Service port</b>	2 Threaded port G 1/4"
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100% continuous rating
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 (previously DIN 43650) Form A for cable plug, Type 2508 (not included)
<b>Power consumption</b>	AC 11 VA (inrush), 6 VA (hold), DC 2 W
<b>Protection class</b>	IP65 with cable plug
<b>Installation</b>	As required, preferably with actuator upright
<b>Response times <sup>1)</sup></b>	
Opening	20 ms
Closing	40 ms

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C acc. to ISO 12238  
*Opening*: pressure rise 0 to 90%, *Closing*: pressure drop 100 to 10%

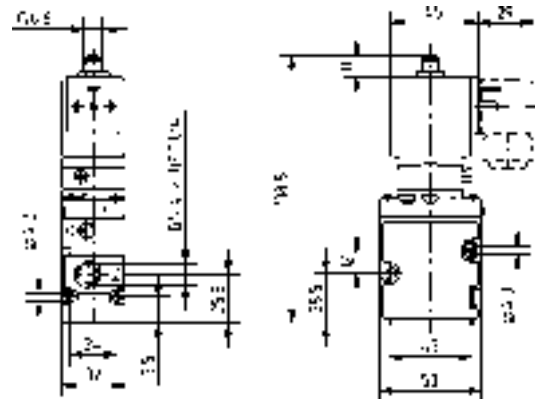
### Options

- ATEX approvals
- Without manual override

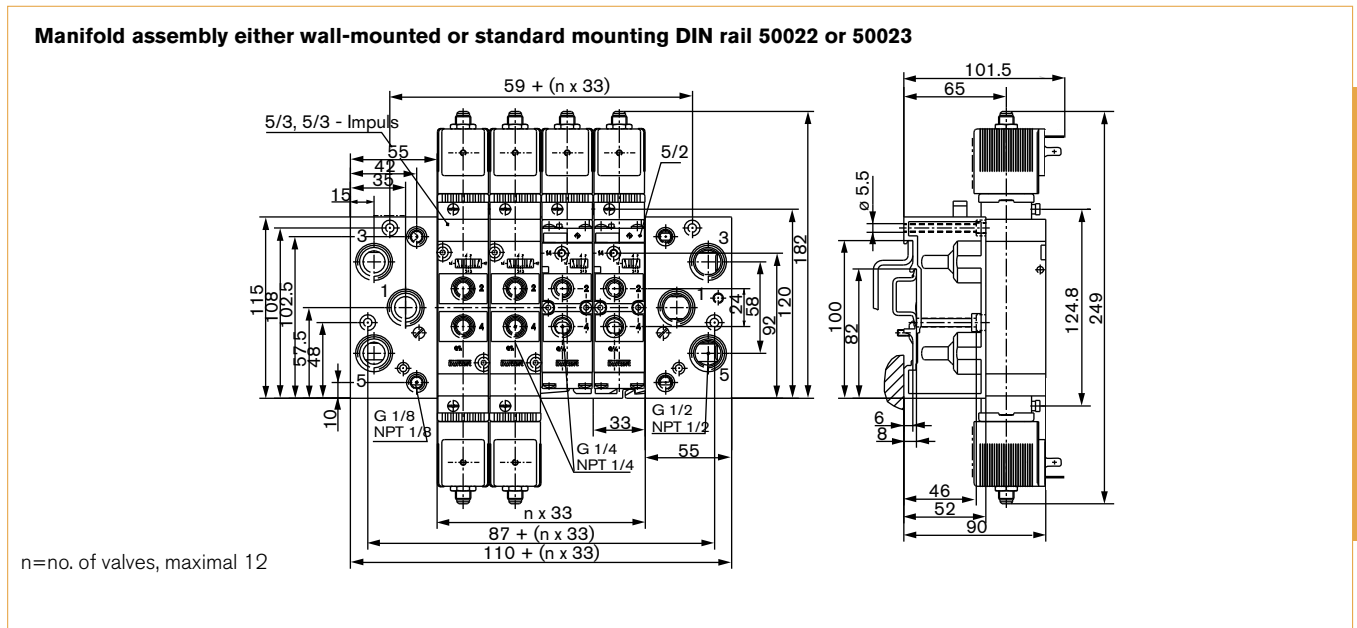
### Envelope Dimensions [mm] (see datasheet for details)



A	B	C
53	32	138.5



## Dimensions Type MP07 pneumatic modules [mm]



Valve assembly on pneumatic modules Type MP07 using the supplied M4 screws

## Ordering Chart

Circuit function	Port connection threaded port [inch]	Orifice [mm]	Q <sub>Nn</sub> value air [l/min]	Pressure range [bar]	Nominal power [W]	Item no. per Voltage/frequency [V/Hz]		
						024/DC	024/50-60	230/50-60
<b>NBR and PUR (polyamide)</b>								
C 3/2-way valve normally closed	G 1/4	8.0	1300	2 - 8	2	132 457	132 458	132 460
D 3/2-way valve normally open	G 1/4	8.0	1300	2 - 8	2	132 461	132 462	132 464

## Accessories

Description	Item no.
Connector module right G 1/2"	635 331
Intermediate supply module	637 505
Pneumatic basic module, 2 valves universal (for 3/2-, 5/2- and 5/3-way)	635 319
Pneumatic basic module, 3 valves universal (for 3/2-, 5/2- and 5/3-way)	635 343
Connector module left G 1/2"	635 324
Covering plate for 5/2- and 5/3-way (to cover unused valve positions)	635 335
Covering plate for 3/2-way (to cover unused connections)	635 337
Blanking plug G 1/8"	780 141
Blanking plug G 1/4"	780 142
Blanking plug G 1/2"	780 144
Silencer G 1/8" *	780 779
Silencer G 1/4" *	780 780
Silencer G 1/2"	780 782
Labelling plate (64 pieces)	635 411

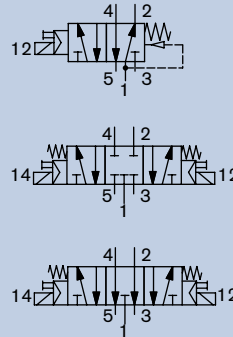
\* Packaging unit; 10 pieces

# 5/2 and 5/3-way Solenoid Valve for pneumatics

6519

## G 1/4"

- High flow rate
- Low power consumption
- Single and manifold assembly
- High switching reliability
- Manual override as standard
- Corrosion-resistant construction



Type 6519 is a pilot operated 5/2 or 5/3-way valve. The valve width of 32 mm allows high flow rates. The use of high quality materials allows the use of the valves even under outdoor and chemical atmosphere. The valves can be used individually or in blocks.

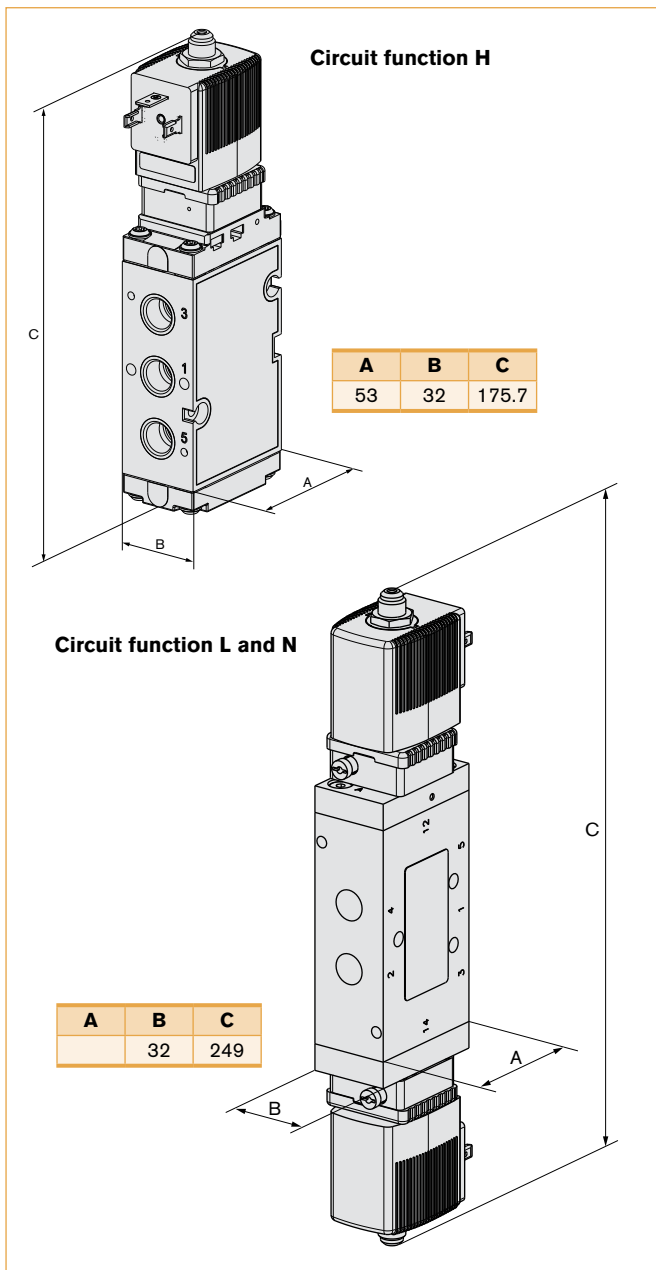
### Technical Data

<b>Orifice</b>	DN8.0 and 9.0 mm
<b>Body materials</b>	
Pilot valve	Polyamide
Main valve	5/2-way; polyamide, 5/3-way; aluminium
<b>Thread insert material</b>	Brass (stainless steel on request)
<b>Seal material</b>	NBR, NBR and PUR
<b>Pneumatic connections</b>	
Supply ports 1,3,5	Threaded port G 1/4", can also be flanged
Service ports 2 and 4	Threaded port G 1/4" (on request NPT 1/4")
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A, Type 2508 (not delivered)
<b>Protection class</b>	IP65 with cable plug
<b>Operating voltage</b>	24 V DC, 24/110/230 V, 50-60 Hz
<b>Voltage tolerance</b>	±10%
<b>Power consumption</b>	AC 11 VA (inrush), 6 VA (hold), DC 2 W
<b>Power consumption coil</b>	2 W (100% continuous rating)
<b>Ambient temperature</b>	-25 °C to +55 °C
<b>Mediums</b>	Lubricated or non-lubricated compressed air, neutral gases Technical vacuum on request
<b>Environmental conditions</b>	Open air, chemical atmosphere
<b>Response times <sup>1)</sup></b>	
<b>Opening</b>	20 ms
<b>Closing</b>	40 ms

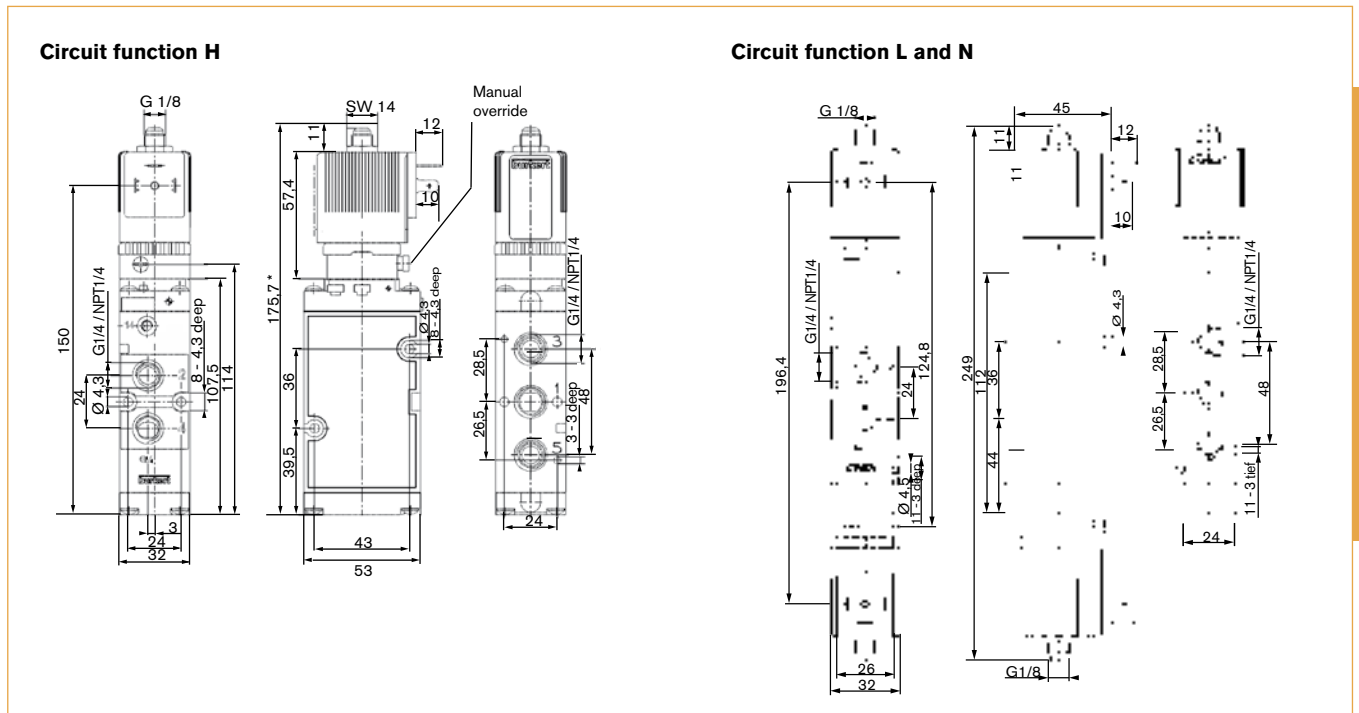
<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C acc. to ISO 12238.  
*Opening:* Pressure rise 0 to 90%,  
*Closing:* Pressure drop 100 to 10%

**Note:** Pneumatic module see Type 6518

### Envelope Dimensions [mm] (see datasheet for details)



Envelope Dimensions [mm] (see datasheet for details)



6519

Ordering Chart

Circuit function	Orifice [mm]	Seal material (Body material)	Port connection threaded port [inch]	QnN-value air <sup>1)</sup> [l/min]	Pressure range <sup>2)</sup> [bar]	Mass [g]	Nominal power [W]	Voltage/frequency [V/Hz]	Item no.
<b>Type 6519 threaded version – thread insert material brass, threaded port 1, 3 and 5 can also be flanged</b>									
H 5/2-way valve, servo-assisted, in de-energized position port 2 pressurized, port 4 exhausted	8.0	NBR and PUR (Polyamide)	G 1/4	1300	2 - 8	450	2	024/DC	132 465
								024/50-60	132 466
								110/50-60	132 467
								230/50-60	132 468
L 5/3-way valve, servo-assisted, in middle position all ports locked	9.0	NBR (Aluminium)	G 1/4	1300	3 - 10	720	2	024/DC	132 469
								024/50-60	132 470
								110/50-60	132 471
								230/50-60	132 472
N 5/3-way valve, servo-assisted, in middle position ports 2 and 4 exhausted	9.0	NBR (Aluminium)	G 1/4	1300	3 - 10	720	2	024/DC	132 473
								024/50-60	132 474
								110/50-60	132 475
								230/50-60	132 476

<sup>1)</sup> Flow rate: QnN value air [l/min]: Measured at +20 °C, 6 bar pressure at valve inlet, 1 bar pressure difference

<sup>2)</sup> Pressure values [bar]: Gauge pressures with respect to the prevailing atmospheric pressure

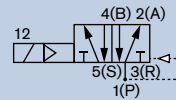


# 5/2-way Solenoid Valve for pneumatics, Ex i-Version

6519 Ex i

## G 1/4"

- Intrinsically safe version
- High flow rate
- High switching reliability
- Corrosion-resistant construction



The 6519 Ex i valve consists of an intrinsically-safe pilot control and a pneumatic amplifier. The diaphragm-controlled valve seats work with very low friction, ensuring reliable switching of the valve, even after long shutdown periods.

### Technical Data

<b>Orifice</b>	DN8,0 mm
<b>Body materials</b>	
Pilot valve	Stainless steel 1.4305 or brass
Main valve	Polyamide, glass-fibre reinforced
<b>Thread insert material</b>	Stainless steel or brass, nickel-plated
<b>Seal material</b>	NBR and PUR
<b>Pneumatic connection</b>	
Supply ports 1,3,5	Threaded port G 1/4"
Service ports 2 and 4	Threaded port G 1/4"
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (not included). Ensure correct polarity!
<b>Protection class</b>	IP65 with cable plug
<b>Ambient temperature</b>	-25 °C to +55 °C
<b>Medium</b>	Lubricated or non-lubricated compressed air, instrument air, nitrogen
<b>Environmental conditions</b>	Open air, chemical atmosphere
<b>For use in zone</b>	1, 2, 21 and 22
<b>Response times <sup>1)</sup></b>	
Opening	75 ms
Closing	115 ms

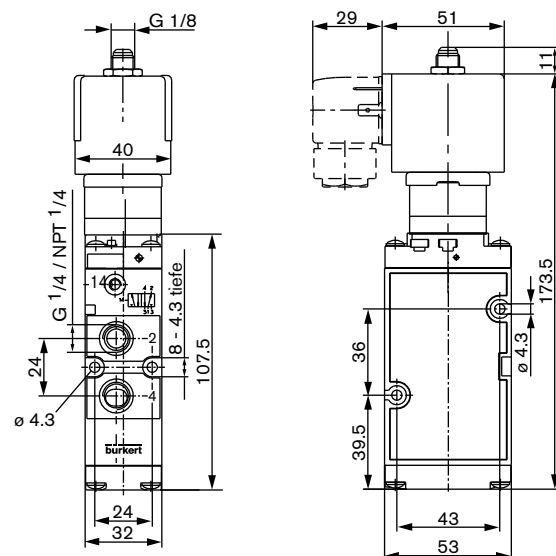
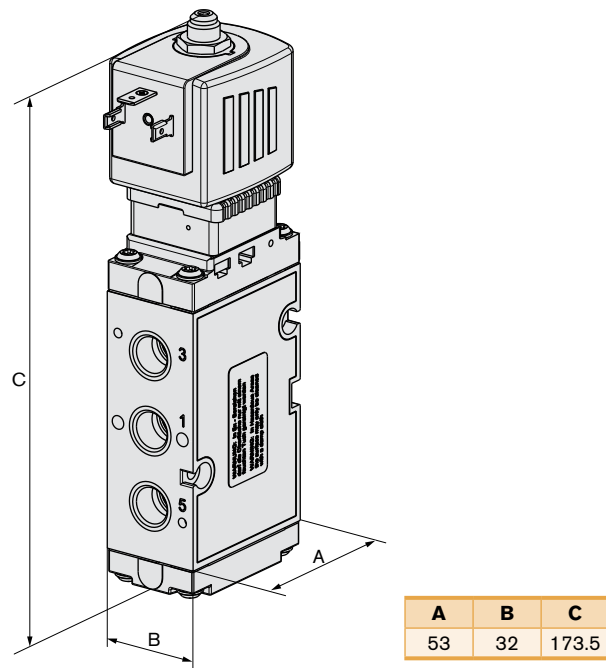
<sup>1)</sup> Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.  
 Opening: Pressure rise 0 to 90%  
 Closing: Pressure drop 100 to 10%

**Note:** Valves with Ex i coil are not suitable for block construction.

### Options

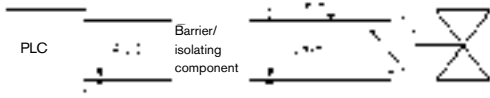
- With manual override
- High impedance coil

### Envelope Dimensions [mm] (see datasheet for details)



**Note**

The units may only be used in explosive atmospheres in the manner approved by the Federal Institute of Physics and Technology (PTB), i.e., the permissible maximum electrical values must be complied with. Suitable barriers and isolating modules are available for this.



The valve is intended for operation on 24 VDC outputs via the intermediate switching of a corresponding intrinsically-safe operating resource (isolating module or barrier). If required, request the "Recommended Barrier and Isolating Module" data sheet.

**Electrical data - coil AC10 Ex i**

<b>Approval</b>	II 2G Ex ia IIC T6 PTB 01 ATEX 2101 II 2D Ex ia D21 T 80°C	
<b>Functional values for valve switching function<sup>1)</sup></b>	<b>at +20°C</b>	<b>at +55°C</b>
	Minimum switching current	29 mA
	Nominal resistance of the coil	310 Ω
Minimum terminal voltage	9.0 V	10.4 V
<b>Permissible maximum values acc. to certificate of conformity</b>		
U <sub>i</sub>	35 V	
I <sub>i</sub>	0.9 A	
P <sub>i</sub>	1.1 W	

<sup>1)</sup> With high impedance coil on request

**Ordering Chart**

Circuit function	Orifice [mm]	Seal material (Body material)	Port connection threaded port [inch]	QNm-value air <sup>1)</sup> [l/min]	Pressure range <sup>2)</sup> [bar]	Mass [g]	Body material pilot valve	Pilot air thread insert material	Item no.
<b>Type 6519 threaded version Ex i</b>									
H 5/2-way valve, servo-assisted, in de-energized position port 2 pressurized, port 4 exhausted	8.0	NBR and PUR (Polyamide)	G 1/4	1300	2 - 8	670	St. St. 1.4305	St. St.	144 484
								brass, nickel plated	144 485
							Brass	brass, nickel plated	147 252

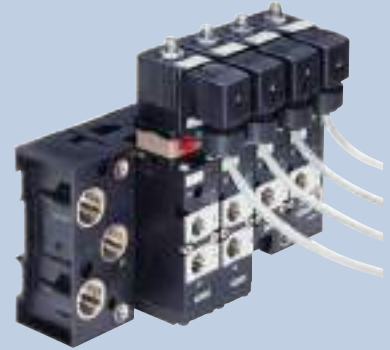
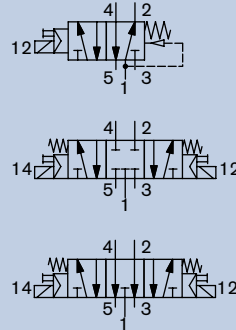
<sup>1)</sup> Flow rate: QNm value air [l/min]: Measured at +20 °C, 6 bar pressure at valve inlet, 1 bar pressure difference

<sup>2)</sup> Pressure values [bar]: Gauge pressures with respect to the prevailing atmospheric pressure

## 5/2 and 5/3-way Solenoid Valve for pneumatics, Ex m Version

### G 1/4"

- Ex m model with 3 m moulded cable
- High flow rate
- Single and manifold assembly
- High switching reliability
- Manual override as standard



mounting example

The Ex m approval is achieved by the mounting of an approved push-over coil. The cable connection and the cable are non-detachable and sealed together with the valve. The valves can be used individually or in blocks.

### Technical Data

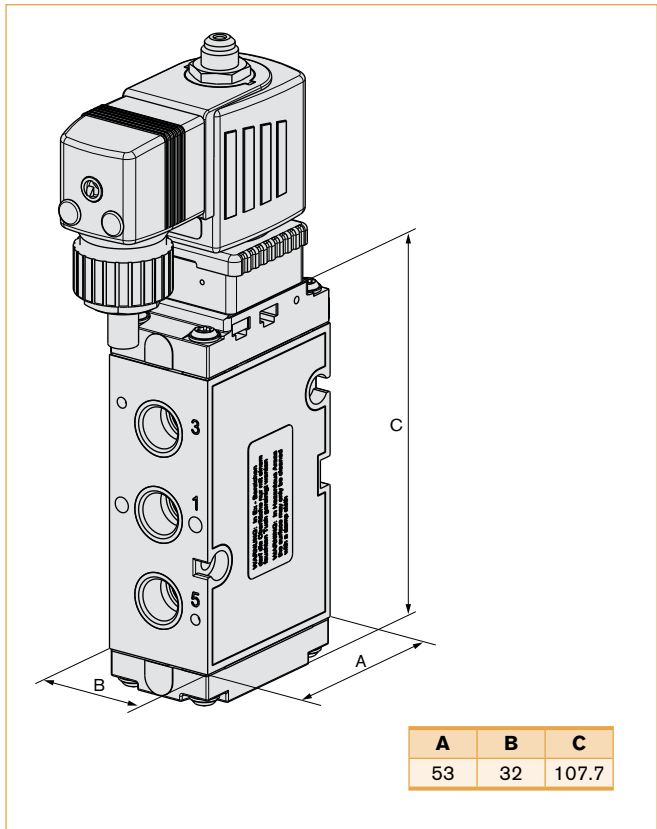
<b>Orifice</b>	DN8.0 and 9.0 mm
<b>Body materials</b>	
Pilot valve	Polyamide
Main valve	5/2-way; Polyamide, 5/3-way; Aluminium
<b>Thread insert material</b>	Brass (stainless steel on request)
<b>Seal materials</b>	NBR, NBR and PUR
<b>Pneumatic connection</b>	
Supply ports 1,3,5	Threaded port G 1/4", can also be flanged
Service ports 2 and 4	Threaded port G 1/4" (on request NPT 1/4")
<b>Electrical connection</b>	Moulded cable, 3 m (non-detachable), Terminal box on request
<b>Protection class</b>	IP65
<b>Approval</b>	Ex m II T5, II 2G, II 2D, IP65, max. surface temperature 100 °C
<b>Operating voltage</b>	24/110/230 V UC (all currents)
<b>Voltage tolerance</b>	±10%
<b>Power consumption coil</b>	3 W (100% continuous rating)
<b>Ambient temperature</b>	-25 °C to +50 °C
<b>Medium</b>	Lubricated or non-lubricated compressed air, on request neutral gases technical vacuum
<b>Environmental conditions</b>	Open air, chemical atmosphere
<b>For use in zone</b>	1, 2, 21 and 22
<b>Response times <sup>1)</sup></b>	
<b>Opening</b>	20 ms
<b>Closing</b>	50 ms

<sup>1)</sup> Measured at valve outlet at 6 bar and +20°C acc. to ISO 12238.

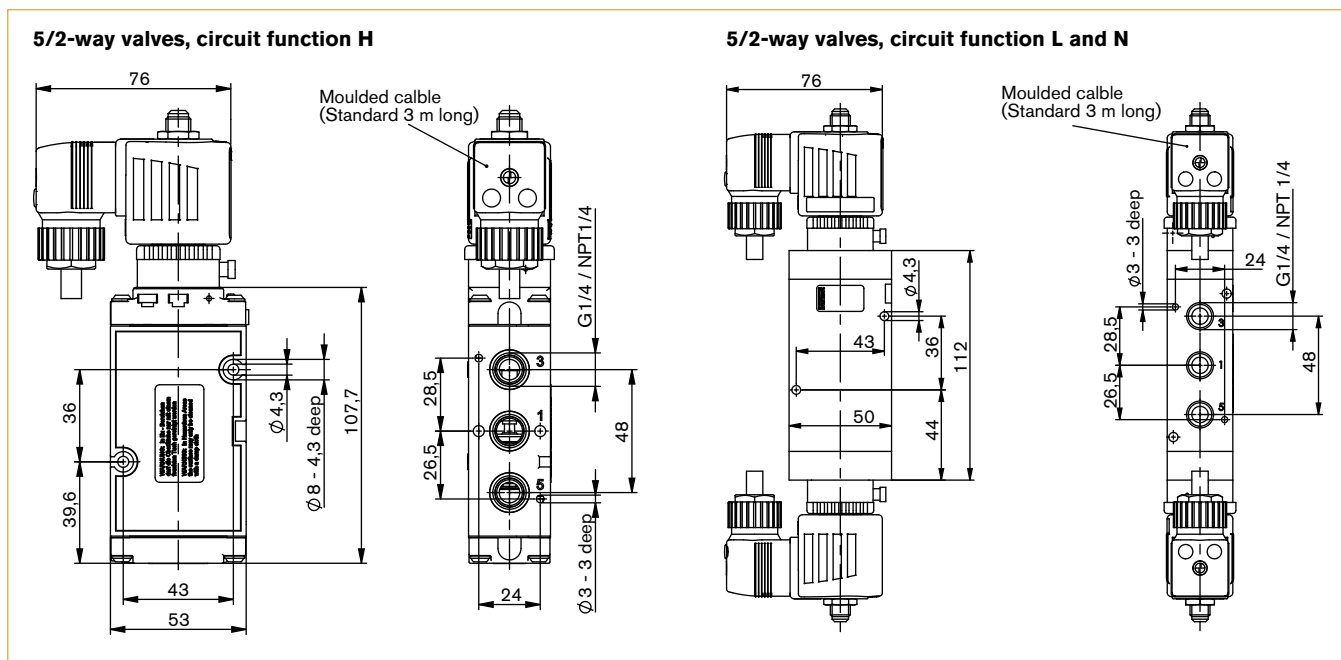
Opening: Pressure rise 0 to 90%  
Closing: Pressure drop 100 to 10%

**Note:** pneumatic modules see Type 6518

### Envelope Dimensions [mm] (see datasheet for details)



Envelope Dimensions [mm] (see datasheet for details)



6519 Ex m

### Ordering table

Circuit function	Orifice [mm]	Seal material (Body material)	Port connection threaded port [inch]	QNm-value air <sup>1)</sup> [l/min]	Pressure range <sup>2)</sup> [bar]	Mass [g]	Nominal power [W]	Voltage/frequency [V/Hz]	Item no.
<b>Type 6519 threaded version Ex m – thread insert material brass, threaded port 1, 3 and 5 can also be flanged; with moulded cable, 3 m long</b> <sup>3) 4)</sup>									
H 5/2-way valve, servo-assisted, in de-energized position port 2 pressurized, port 4 exhausted	8.0	NBR and PUR (Polyamide)	G 1/4	1300	2 - 8	700	3	024/UC	134 722
								110/UC	134 723
								230/UC	134 724
L 5/3-way valve, servo-assisted, in middle position all ports locked	9.0	NBR (Aluminium)	G 1/4	1300	3 - 10	1.100	3	024/UC	278 221
								110/UC	134 726
								230/UC	134 727
N 5/3-way valve, servo-assisted, in middle position ports 2 and 4 exhausted	9.0	NBR (Aluminium)	G 1/4	1300	3 - 10	1.100	3	024/UC	278 222
								110/UC	134 729
								230/UC	134 730

<sup>1)</sup> Flow rate: QNm value air [l/min]: Measured at +20 °C, 6 bar pressure at valve inlet, 1 bar pressure difference

<sup>2)</sup> Pressure values [bar]: Gauge pressures with respect to the prevailing atmospheric pressure

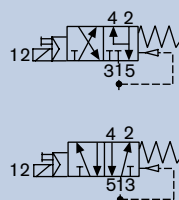
<sup>3)</sup> Versions with terminal box on request

<sup>4)</sup> Circuit function H (5/2 way) as impulse version on request

## 5/2 on 3/2-way Convertible Solenoid Valve for pneumatics, NAMUR version

### G 1/4", NAMUR

- High flow rate
- Low power consumption
- High switching reliability
- Manual override as standard
- Corrosion-resistant construction



The solenoid valve, Type 6519 NAMUR, is provided with a NAMUR standard flange for easy, direct mounting to pneumatic actuators. It is manufactured from high-quality manmade materials.

### Technical Data

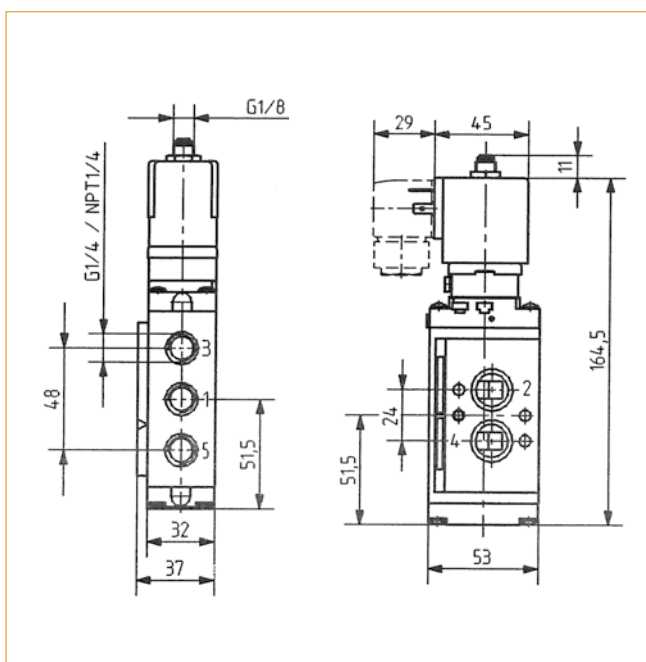
<b>Orifice</b>	DN6.0 mm
<b>Body Materials</b>	
Pilot valve and main valve	Polyamide (PA)
<b>Thread insert material</b>	Brass, nickel-plated or stainless steel
<b>Seal material</b>	NBR and PUR
<b>Pneumatic connection</b>	
Supply ports 1,3,5	Threaded port G 1/4"
Service ports 2 and 4	NAMUR flange
<b>Electrical connection</b>	Tag connector acc. to DIN EN 175301-803 Form A, Type 2508 (not included)
<b>Power consumption</b>	AC 11 VA (inrush), 6 VA (hold), DC 2 W
<b>Protection</b>	IP65 with cable plug
<b>Operating voltage</b>	024/DC, 024/230 V, 50-60 Hz
<b>Voltage tolerance</b>	± 10%
<b>Duty cycle</b>	100 % continuous rating
<b>Ambient temperature</b>	-25 °C to +55 °C
<b>Mediums</b>	Compressed air, nitrogen, instrument air
<b>Environmental conditions</b>	Slightly aggressive, also open air
<b>Response times <sup>1)</sup></b>	
Opening	20 ms
Closing	40 ms

<sup>1)</sup> Measured at valve outlet at 6 bar and +20 °C acc. to ISO 12238.

Opening: Pressure rise 0 to 90%,

Closing: Pressure drop 100 to 10%

Envelope Dimensions [mm] (see datasheet for details)



## Ordering Chart

Thread insert material	Port (P) [inch]	Orifice [mm]	Qn [l/min]	Pressure range [bar]	Item no. voltage/frequency [V/Hz]		
					024/DC	024/AC	230/AC
<b>Type 6519 NAMUR version, 5/2-way convertible to 3/2-way</b>							
brass nickelplated	G 1/4	6	900	2 - 8	131 421	131 422	131 424
stainless steel <sup>1)</sup>	G 1/4	6	900	2 - 8	131 425	131 426	131 428

<sup>1)</sup> If the connectors are from stainless steel, the mounting screws will also be from stainless steel